WEST VIRGINIA UNIVERSITY
CATALOGUE 1946-47

REGISTRAR'S OFF

Mary Sayles

WEST VIRGINIA UNIVERSITY BULLETIN

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THE CATALOGUE NUMBER

The 1946-47 Session

ANNOUNCEMENTS OF THE 1947-48 SESSION

June 1947

MORGANTOWN, WEST VIRGINIA

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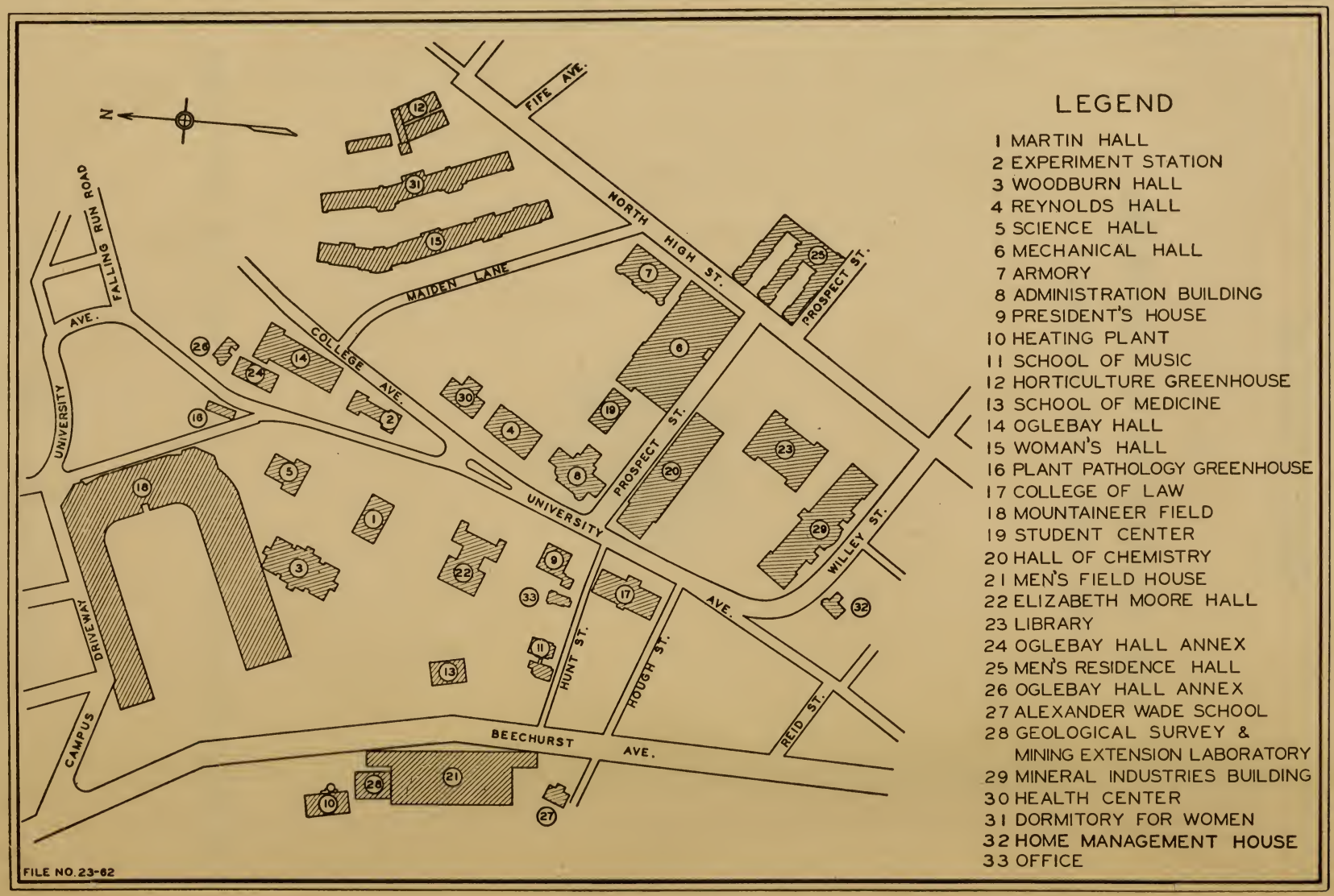

LEGEND

1 MARTIN HALL
2 EXPERIMENT STATION
3 WOODBURN HALL
4 REYNOLDS HALL
5 SCIENCE HALL
6 MECHANICAL HALL
7 ARMORY
8 ADMINISTRATION BUILDING
9 PRESIDENT'S HOUSE
10 HEATING PLANT
11 SCHOOL OF MUSIC
12 HORTICULTURE GREENHOUSE
13 SCHOOL OF MEDICINE
14 OGLEBAY HALL
15 WOMAN'S HALL
16 PLANT PATHOLOGY GREENHOUSE
17 COLLEGE OF LAW
18 MOUNTAINEER FIELD
19 STUDENT CENTER
20 HALL OF CHEMISTRY
21 MEN'S FIELD HOUSE
22 ELIZABETH MOORE HALL
23 LIBRARY
24 OGLEBAY HALL ANNEX
25 MEN'S RESIDENCE HALL
26 OGLEBAY HALL ANNEX
27 ALEXANDER WADE SCHOOL
28 GEOLOGICAL SURVEY & MINING EXTENSION LABORATORY
29 MINERAL INDUSTRIES BUILDING
30 HEALTH CENTER
31 DORMITORY FOR WOMEN
32 HOME MANAGEMENT HOUSE
33 OFFICE

MAP OF CAMPUS

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Year 1947

JANUARY

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The days on which the University is in session are printed in light-face type; Sundays, holidays, and vacations in bold-face type.

The University Calendar*

1947

May 31, Saturday——Alumni Day
June 1, Sunday——Baccalaureate Exercises
June 2, Monday——Commencement Day
June 4, 5, Wednesday and Thursday——Registration for Summer Session
June 6, Friday——First recitations, Summer Session
July 4, Friday, to July 6, Sunday, inclusive——Independence Day recess
July 15, Tuesday——Close of first term, Summer Session
July 16, Wednesday——Registration for second term, Summer Session
July 17, Thursday——First recitations, second term, Summer Session
August 22, Friday——Close of Summer Session
September 11, Thursday, to September 17, Wednesday, inclusive
Freshman Week Program
September 13, Saturday——Registration of Freshmen
September 15, 16, and 17, Monday, Tuesday, and Wednesday
General registration for first semester
September 18, Thursday——First recitations, first semester
October 14, Tuesday——Meeting of University Senate
November 10, Monday——Midsemester reports due
November 26, Wednesday, to November 30, Sunday, inclusive
Thanksgiving recess
December 20, Saturday, to January 4, Sunday, inclusive——Christmas recess

1948

January 17, Saturday, to January 24, Saturday, inclusive
Final examinations for first semester
January 27 and 28, Tuesday and Wednesday——Registration for second semester
January 29, Thursday——First recitations, second semester
February 10, Tuesday——Meeting of University Senate
March 22, Monday——Midsemester reports due
March 25, Thursday, to March 31, Wednesday, inclusive——Easter recess
May 11, Tuesday——Meeting of University Senate
May 21, Friday, to May 28, Friday, inclusive
Final examinations for second semester
May 29, Saturday——Alumni Day
May 30, Sunday——Baccalaureate Exercises
May 31, Monday——Commencement Day

*Subject to change.

West Virginia University

Morgantown

Established February 7, 1867

The Board of Governors

	TERM EXPIRES
RAYMOND E. SALVATI, PRESIDENT, *Huntington*	1956
A. C. SPURR, VICE-PRESIDENT, *Fairmont*	1952
CHARLES P. MEAD, *Wheeling*	1948
MRS. GEORGE D. HILL, *Camden-on-Gauley*	1949
E. G. OTEY, *Bluefield*	1950
THOMAS L. HARRIS, *Parkersburg*	1951
K. DOUGLAS BOWERS, *Beckley*	1953
CHARLES E. HODGES, *Charleston*	1954
WILLIAM G. THOMPSON, *Montgomery*	1955

CHARLES T. NEFF, JR., EXECUTIVE SECRETARY, *Morgantown*

The Board of Governors has charge of the educational, administrative, financial, and business affairs of the University and of Potomac State School of West Virginia University.

PRESS OF
MORGANTOWN PRINTING AND BINDING COMPANY
MORGANTOWN, WEST VIRGINIA

Part I

The Staff of Instruction, Research, and Extension*

THE ADMINISTRATIVE OFFICERS

General

IRVIN STEWART, PH.D., LL.D., *President of the University* (1946).

CHARLES THOMPSON NEFF, JR., A.B., *Vice-president of the University and Comptroller* (1946), 1921.

EDNA ARNOLD, M.A., *Dean of Women* (1939), 1910.

RICHARD ASPINALL, D.B., PH.D., *Director of Student Affairs and Director of University Extension* (1945), 1936, 1930.

ELMER M. GRIEDER, B.S.L.S., M.S., *Librarian* (1947).

J. EVERETT LONG, M.A., *Registrar* (1945), 1929.

The Colleges, Schools, and Divisions

ROBERT BARCLAY DUSTMAN, PH.D., *Chairman of the Graduate Council* (1947), 1924.

FRANK CUTHBERT, MUS.D., *Director of the School of Music* (1934).

ANDREW JACKSON DADISMAN, PH.D., *Director of the Summer Session* (1929), 1914.

ROLAND PARKER DAVIS, PH.D., *Acting Dean of Engineering* (1945), 1911.

THOMAS PORTER HARDMAN, J.D., *Dean of the College of Law* (1931), 1913.

JOSEPH LESTER HAYMAN, PH.C., M.S., *Dean of the College of Pharmacy* (1936), 1919.

CHARLES T. HOLLAND, B.S.E.M., M.S., *Assistant Director of Mining and Industrial Extension* (1938), 1917.

WALTER ALLOS KOEHLER, PH.D., *Acting Director of the Engineering Experiment Station* (1945), 1924.

EDWARD PAGE LUKERT, *Colonel, Infantry, U. S. Army, Commandant of Cadets* (1945).

CLAYTON ROBERTS ORTON, PH.D., SC.D., *Dean of the College of Agriculture, Forestry, and Home Economics and Director of the Agricultural Experiment Station* (1938), 1929.

PERLEY ISAAC REED, PH.D., *Director of the School of Journalism* (1939), 1920.

G. OTT ROMNEY, M.A., *Dean of the School of Physical Education and Athletics* (1946).

WILSON PORTER SHORTRIDGE, PH.D., *Dean of the College of Arts and Sciences* (1929), 1922.

JOHN NATHAN SIMPSON, A.B., M.D., *Dean Emeritus, School of Medicine* (1935), 1902.

*NOTE: Date of appointment to present position is given in parentheses after title; date following, if any, indicates year of first appointment to a University staff position.

FORREST WILBUR STEMPLE, PH.D., *Acting Dean of the College of Education* (1945), 1916.

EDWARD JERALD VAN LIERE, M.D., PH.D., *Dean of the School of Medicine* (1937), 1921.

The Council of Administration; The Senate

For a description of the Council of Administration and of the University Senate, see the section on Government and Organization, page 36.

The Graduate Council

ROBERT BARCLAY DUSTMAN, PH.D., *Professor of Agricultural Biochemistry (Chairman)*.

ARMAND RENE COLLETT, PH.D., *Professor of Chemistry.*

ROBERT CAMERON COLWELL, PH.D., *Professor of Physics.*

ALEXANDER HARDIE FORMAN, PH.D., *Professor of Electrical Engineering.*

FORREST WILBUR STEMPLE, PH.D., *Professor of Education.*

FESTUS PAUL SUMMERS, PH.D., *Professor of History.*

HARRY GROVE WHEAT, PH.D., *Professor of Education.*

Other Administrative Officers

MARY CATHERINE BAYLES, A.B., *Assistant Registrar* (1946), 1929.

STEPHEN FULLER CROCKER, A.B., A.M., *Chairman of the Humanities Course* (1943), 1937.

ROY M. HAWLEY, A.B., *Director of Intercollegiate Athletics* (1938), 1935.

WILLIAM H. HENDERSON, A.B., B.D., *Executive Secretary, Young Men's Christian Association* (1947).

LYLE EDDY HEROD, M.S., *Assistant to the Registrar* (1947).

DAVID W. JACOBS, A.B., *Director, Bureau of Information* (1938).

GERALD JENNY, M.S., *University Editor* (1933), 1929; *Director of University Broadcasting* (1938).

LOUISE KEENER, B.A., *Assistant to the Comptroller* (1936), 1929.

BERNARD R. MCGREGOR, B.S.ED., *Director of the University Band* (1938), 1935.

ALVIN MARTIN MILLER, B.S.M.E., *Superintendent of Buildings and Grounds* (1945).

BERTHA BROWNING PURINTON, A.M., *Assistant Registrar Emeritus* (1946), 1919.

RUTH ELEANOR ROBINSON, A.M., *Manager, University Book Store* (1944), 1939.

HARRY EVERETT STONE, A.M., *Secretary of Student Loans and Placement* (1936), 1922.

ELEANOR CRAWFORD WIRTH,[2] B.S., *Executive Secretary, Young Women's Christian Association* (1944).

[2]Resigned May 31, 1947.

The Student Health Service

JOHN JOSEPH LAWLESS, PH.D., M.D., *Director, Student Health Service* (1944), 1935.

SAMUEL JOHN MORRIS, M.D., *Physician and Attending Physician, Department of Athletics* (1935), 1912.

CLARK KENDALL SLEETH, A.B., B.S., M.D., *Physician* (1946), 1935.

OLAN TERRELL COFFIELD, M.D., *Assistant Physician* (1946).

FABRY L. HAWK, *Technician* (1935), 1933.
ALBERT F. WOJCIK, B.S.PHAR., *Registered Pharmacist* (1945).
PEARL BENVENUTO, R.N., *Nurse* (1945).
BETTY EMERSON, R.N., *Nurse* (1944).
LELA VIRGINIA STUMP, *Technician* (1946).
CLETE MILLER SMITH, *Assistant Technician* (part time) (1946).

The Residence Halls

MAYME ELIZABETH WADDELL, B.S., M.A., *Business Director* (1935), 1930.
BERTHA HAWLEY ALLEN, A.B., *Social Director, Terrace Hall* (1945), 1944.
EDNA ARNOLD, M.A., *Social Director, Women's Hall, Center* (1935).
REA BUCKLEY, Diploma in Piano, *Social Director, Women's Hall, North* (1946).
MARY HELEN BURNS,[1] B.A., M.A., *Social Director, Women's Hall* (1946).
PANSY OLIVE CORNWELL, Normal Diploma, *Assistant to Social Directors, Women's Hall* (1944).
LOUIS D. CORSON, M.A., *Faculty Resident, Men's Residence Hall* (1946).
ANN CULLEY DYE, B.S., *Dietitian, Women's and Terrace Dining Halls* (1937).
EVALYN HALL, B.S., *Assistant Dietitian, Terrace Dining Hall* (1946).
CLARA REED HARDESTY, *Assistant to Social Directors, Terrace Hall* (1945).
KATHLEEN MITCHELL, *Social Director, Women's Hall, South* (1942), 1940.
MARGUERITE MARIE NEARNBERG, B.S., *Assistant Dietitian, Women's Hall* (1945).
GEORGANNA M. ROMINE, A.B., *Assistant Dietitian, Men's Dining Hall* (1946).
MABEL K. SAMUEL, B.S., *Dietitian, Men's Dining Hall* (1946).
HAZEL TOWNSEND, M.A., *Assistant Social Director, Terrace Hall* (1946).
FRANCES LUCILLE TWIGG, B.S., *Assistant Dietitian, Men's Dining Hall* (1945).

[1]Resigned September 1, 1946.

THE STAFF OF INSTRUCTION

Professors

ALBERT SALISBURY ABEL, A.B., J.D., LL.M., *Professsor of Law* (1946), 1940.
HOWARD BUSHNELL ALLEN, PH.D., *Professor of Education* (1932), 1920.
CHARLES HENRY AMBLER, PH.D., *Professor Emeritus of History* (1947), 1917.
WALTER WARDLAW ARMENTROUT, PH.D., *Professor of Agricultural Economics* (1936), 1924.
HORACE ATWOOD, M.S.AGR., *Professor Emeritus of Poultry Husbandry* (1931), 1897.
ROBERT DODGE BALDWIN, PH.D., *Professor of Education* (1933), 1931.
GORDON ALGER BERGY, PH.C., M.S., *Professor of Pharmacy* (1921), 1916.
LOWELL BESLEY, B.S., M.F., *Professor of Forest Management* (1946), 1937.
GEORGE PAUL BOOMSLITER, M.S.C.E., *Professor of Mechanics* (1920).
MAURICE GRAHAM BROOKS, M.S., *Professor of Wildlife Management* (1947), 1935.
CHRISTOPHER GEORGE BROUZAS, PH.D., *Professor of Latin and Greek* (1935), 1926.
JAMES MORTON CALLAHAN, PH.D., *Professor Emeritus of History* (1940), 1902.
LEO CARLIN, A.B., LL.B., *Professor of Law* (1921), 1916.
CARL HENRY CATHER, M.S., *Professor of Mechanics* (1947), 1916.
HAROLD MALCOLM CATHER, B.S.M.E., M.E., M.S.M.E., *Professor of Mechanical Engineering* (1945), 1919.

SIMON B. CHANDLER, A.M., M.D., *Professor of Anatomy* (1935).

OLIVER PERRY CHITWOOD, PH.D., LL.D., *Professor Emeritus of History* (1946), 1907.

FRIEND EBENEZER CLARK, PH.D., *Professor Emeritus of Chemistry* (1947), 1914.

JAMES IRVING CLOWER,[1] B.S.M.E., M.E., *Professor of Machine Design* (1945).

ARMAND RENE COLLETT, PH.D., *Professor of Chemistry* (1939), 1924.

CLYDE LEMUEL COLSON, A.B., LL.B., S.J.D., *Professor of Law* (1945), 1935.

RACHEL HARTSHORN COLWELL, M.A., *Professor Emeritus of Home Economics and Education* (1935), 1910.

ROBERT CAMERON COLWELL, PH.D., *Professor of Physics* (1924), 1918.

EARL LEMLEY CORE, PH.D., *Professor of Botany* (1942), 1928.

STEPHEN FULLER CROCKER,[2] A.M., *Professor of English* (1946), 1931.

FRANK CUTHBERT, MUS.D., *Professor of Music* (1934).

ANDREW JACKSON DADISMAN, PH.D., *Professor of Economics* (1933), 1914.

ARLEIGH LEE DARBY, A.M., LITT.D., *Professor of Romance Languages* (1929), 1910.

EARL CLAUDIUS HAMILTON DAVIES, PH.D., *Professor of Cemistry* (1931), 1920.

HANNIBAL ALBERT DAVIS, PH.D., *Professor of Mathematics* (1947), 1921.

ROLAND PARKER DAVIS, PH.D., *Professor of Structural Engineering* (1911).

EDMUND CHARLES DICKINSON, A.B., J.D., *Professor of Law* (1921).

GIDEON STANHOPE DODDS, B.A., M.A., PH.D., *Professor of Histology and Embryology* (1925), 1918.

ROBERT TUCKER DONLEY, A.B., LL.B., *Professor of Law* (1947), 1942.

WILLIAM SMITH DOWNS, B.S.C.E., C.E., *Professor (part time) of Railway and Highway Engineering* (1935), 1931.

JOHN WILLIAM DRAPER, PH.D., *Professor of English* (1929).

ROBERT BARCLAY DUSTMAN, PH.D., *Professor of Agricultural Biochemistry* (1929), 1924.

JOHN ARNDT EIESLAND, PH.D., *Professor Emeritus of Mathematics* (1938), 1907.

THOMAS EDSON ENNIS, PH.D., *Professor of History* (1946), 1930.

HARVEY D. ERICKSON, PH.D., *Professor of Forest Utilization* (1947), 1937.

CLEMENT COLEMAN FENTON,[4] M.S., M.D., *Professor of Pathology and Clinical Pathology* (1926), 1922.

ORFA REX FORD, PH.D., *Professor of Physics* (1943), 1925.

ALEXANDER HARDIE FORMAN, M.M.E., PH.D., *Professor of Electrical Engineering* (1916), 1913.

CARL MAYNARD FRASURE, PH.D., *Professor of Political Science* (1940), 1927.

HARRY MARION FRIDLEY, PH.D., *Professor of Geology* (1943), 1928.

MALCOLM CURTIS GAAR,[3] B.S., M.S., PH.D., *Professor of Rural Organization* (1945), 1938.

JAMES HERBERT GILL, M.E., *Professor of Machine Construction and Superintendent of Shops (limited service)* (1940), 1920.

LLOYD RAYMOND GRIBBLE, PH.D., *Professor of Zoology* (1947), 1929.

GRACE MARGARET GRIFFIN, A.M., *Professor of Physical Education* (1944), 1923.

JOHN BEHNY GRUMBEIN, M.M.E., *Professor Emeritus of Power Engineering* (1945), 1903.

ARTHUR A. HALL, B.S.M.E., *Professor of Electrical Engineering* (1922), 1916.

THOMAS PORTER HARDMAN, M.A., J.D., *Professor of Law* (1919), 1913.

THOMAS LUTHER HARRIS, PH.D., *Professor Emeritus of Sociology* (1947), 1921.

JOSEPH LESTER HAYMAN, PH.C., M.S., *Professor of Pharmacognosy* (1936), 1919.
HARRY ORAM HENDERSON, PH.D., *Professor of Dairy Husbandry* (1928), 1919.
JAMES H. HENNING, A.B., M.S., PH.D., *Professor of Speech* (1945).
HUBERT HILL, M.S., *Professor of Chemistry* (1928), 1911.
LAWRENCE BENJAMIN HILL, PH.D., *Professor Emeritus of Education* (1947), 1918.
WILLARD WELLINGTON HODGE, M.A., *Professor Emeritus of Chemical Engineering* (1945), 1921.
CHARLES T. HOLLAND, B.S.E.M., M.S., *Professor of Mining Engineering* (1947), 1930.
EARL HUDELSON, PH.D., *Professor of Education* (1930), 1920.
GEORGE HYATT, JR., B.S., M.S., *Professor of Dairy Husbandry* (1917), 1941.
CARL ALFRED JACOBSON, PH.D., *Professor Emeritus of Chemistry* (1946), 1909.
DAVID DALE JOHNSON, A.M., LITT.D., *Professor Emeritus of English* (1946), 1902.
EDWIN CHANNING JONES, M.S.E.E., *Professor of Electrical Engineering* (1947), 1926.
WALTER ALLOS KOEHLER, CH.E., PH.D., *Professor of Chemical and Ceramic Engineering* (1929), 1924.
CHARLES LESTER LAZZELL, PH.D., *Professor of Chemistry* (1946), 1922.
JULIAN GILBERT LEACH, PH.D., *Professor of Plant Pathology* (1938).
EDWARD ALEXANDER LIVESAY, D.SC., *Professor of Animal Husbandry* (1919).
ALFRED DELBERT LONGHOUSE, B.S., M.S., *Professor of Agricultural Engineering* (1945), 1938.
EDWARD PAGE LUKERT, *Colonel, Infantry. Professor of Military Science and Tactics* (1945).
PERCIVAL LLOYD MACLACHLAN, A.B., PH.D., *Professor of Biochemistry* (1943), 1936.
DAVID FIELDING MARSH, A.B., M.S., PH.D., *Professor of Pharmacology* (1947), 1944.
RAY STANLEY MARSH, M.A., *Professor of Horticulture* (1936).
JAMES H. C. MARTENS,[6] PH.D., *Professor of Geology* (1943), 1929.
FRED A. MOLBY, PH.D., *Professor of Physics* (1921), 1920.
SAMUEL MORRIS,[5] PH.D., *Professor of Chemistry* (1921), 1916.
SAMUEL JOHN MORRIS, M.D., *Professor of Physical Education* (1935), 1912.
RUTH DOUGLAS NOER, M.S., *Professor of Home Economics* (1938), 1925.
DICKSON WARD PARSONS, PH.D., *Professor of Rural Organization* (1939), 1923.
LEONARD MARION PEAIRS, PH.D., *Professor of Entomology* (1914), 1911.
W. CLEMENT PERCIVAL, PH.D., *Professor of Forestry* (1939), 1934.
GEORGE GORDON POHLMAN, PH.D., *Professor of Agronomy* (1938), 1930.
REBECCA LUELLA POLLOCK, PH.D., *Professor of Education* (1928), 1916.
PERLEY ISAAC REED, PH.D., *Professor of Journalism* (1927), 1920.
ALBERT MOORE REESE, PH.D., *Professor Emeritus of Zoology* (1946), 1907.
CLARENCE NEWTON REYNOLDS, JR., PH.D., *Professor of Mathematics* (1931), 1921.
JOHN HARRISON RIETZ, D.V.M., M.S., *Professor Emeritus of Animal Pathology* (1947), 1927.
G. OTT ROMNEY, M.A., *Professor of Physical Education* (1946).
DAVID SALKIN, M.D., *Professor of Medicine (Hopemont)* (1946), 1936.
BURCH HART SCHNEIDER, B.S., M.S., PH.D., *Professor of Animal Husbandry* (1945), 1938.
WILSON PORTER SHORTRIDGE, PH.D., *Professor of History* (1922).
HOWARD PERRY SIMONS, PH.D., *Professor of Chemical Engineering* (1947), 1939.
FRED MANNING SMITH, PH.D., *Professor of English* (1939), 1927.

ROBERT CLIFTON SPANGLER, PH.D., *Professor of Botany* (1926), 1914.
HENRY WITHERS SPEIDEN, M.S.C.E., *Professor of Civil Engineering* (1941), 1931.
CLAUDE CARL SPIKER, PH.D., *Professor of French and Spanish* (1926), 1913.
ROBB SPAULDING SPRAY, PH.D., *Professor Emeritus of Bacteriology and Public Hygiene* (1946), 1921.
ELIZABETH MATTINGLY STALNAKER, PH.D., *Professor of Psychology* (1928), 1925.
MADISON STATHERS, PH.D., *Professor of Romance Languages* (1910), 1906.
FORREST WILBUR STEMPLE, PH.D., *Professor of Education* (1931), 1916.
PERRY DANIEL STRAUSBAUGH, PH.D., *Professor of Botany* (1923).
FESTUS PAUL SUMMERS, A.M., PH.D., *Professor of History* (1946), 1932.
EMIL MCKEE SUNLEY, PH.D., *Professor of Public Welfare* (1938).
LELAND HART TAYLOR, SC.D., *Professor of Zoology* (1939), 1922.
CHARLES DANSER THOMAS, M.S., PH.D., *Professor of Physics* (1947), 1931.
RALPH B. TOWER, B.B.A., M.B.A., PH.D., *Professor of Economics and Business Administration* (1941).
BIRD MARGARET TURNER, PH.D., *Professor Emeritus of Mathematics* (1947), 1923.
EDWARD JERALD VAN LIERE, M.D., PH.D., *Professor of Physiology* (1921).
CHARLES HENRY VEHSE, PH.D., *Professor of Mathematics* (1947), 1929.
ENOCH HOWARD VICKERS, A.M., *Professor Emeritus of Economics and Business Administration* (1938), 1911.
RANDOLPH WYATT WEBSTER,[7] PH.D., *Professor of Physical Education* (1945), 1940.
KYLE CHESTER WESTOVER, B.S., M.S., PH.D., *Professor of Horticulture* (1945), 1921.
HARRY GROVE WHEAT, PH.D., *Professor of Education* (1935).
BENNETT SEXTON WHITE, B.S., M.E., *Professor Emeritus of Drawing and Machine Design* (1946), 1919.
CHARLES VINYARD WILSON, M.S., *Professor of Animal Husbandry* (1946), 1919.
JOHN E. WINTER, PH.D., *Professor of Psychology* (1923), 1921.

[1]Resigned September 15, 1946.
[2]On leave of absence, September 1, 1946, to January 15, 1947.
[3]Resigned August 31, 1946.
[4]Deceased May 28, 1947.
[5]Deceased March 20, 1947.
[6]Resigned May 31, 1947.
[7]Resigned January 15, 1947.

Associate Professors

NELLIE PERREL AMMONS, A.B., A.M., PH.D., *Associate Professor of Botany* (1945), 1920.
BERTIL GOTTFRIED ANDERSON, PH.D., *Associate Professor of Zoology* (1945), 1942.
ROBERT RUSSELL ASHBURN, A.M., *Associate Professor of Spanish* (1944), 1925.
WILFRED HARMON BAKER, B.S.C.E., M.S.C.E., *Associate Professor of Civil Engineering* (1945), 1941.
HORACE LESLIE BARNETT, PH.D., *Associate Professor of Mycology* (1945).
CARTER RICHARD BISHOP, M.A., PH.D., *Associate Professor of English* (1945), 1929.
ROBERT HOWELL BLACK, M.S., *Associate Professor of Animal Husbandry* (1947), 1940.
REED H. BRADFORD,[1] M.A., *Associate Professor of Agricultural Economics* (1946), 1942.
JAMES PAUL BRAWNER, PH.D., *Associate Professor of English* (1945), 1935.

RALPH CLEMENS BRIGGS, B.M., M.M., *Associate Professor of Music* (1946).

JOSEPH LINCOLN CARTLEDGE, PH.D., *Associate Professor of Genetics* (1943), 1936.

LOUIS WATSON CHAPPELL, A.M., *Associate Professor of English* (1928), 1923.

WILLIAM R. CHEDSEY,[2] E.M., *Associate Professor of Mining Engineering* (1946).

WILLIAM HENRY CHILDS, PH.D., *Associate Professor of Horticulture* (1944), 1931.

GEORGE CLARK, M.A., PH.D., *Associate Professor of Anatomy* (1947).

THOMAS BAIRD CLARK, B.S.A., M.S., *Associate Professor of Poultry Husbandry* (1946).

JAMES HARRIS CLARKE, M.S., *Associate Professor of Agricultural Economics* (1947), 1939.

ARTHUR R. COLMER, PH.D., *Associate Professor of Bacteriology* (1945).

KERMIT A. COOK, PH.D., *Associate Professor of Education* (1947), 1935.

JOHN REGINALD CRESSWELL,[3] PH.D., *Associate Professor of Philosophy* (1941), 1929.

QUIN FISCHER CURTIS, PH.D., *Associate Professor of Psychology* (1943), 1941.

LILY BELL DEATRICK,[4] PH.D., *Associate Professor Emeritus of Chemistry* (1946), 1921.

JASON CLARK EASTON, PH.D., *Associate Professor of History* (1943), 1938.

MARJA STEADMAN FEAR,[5] M.A., *Associate Professor of Speech* (1945), 1920.

FREDERICK LINCK GEILER, B.S.PHAR., M.S., *Associate Professor of Pharmacy* (1943), 1928.

JOHN A. GIBSON, JR., PH.D., *Associate Professor of Chemistry* (1945), 1926.

GEORGE WALTER GROW, B.S.M.E., M.S., *Associate Professor of Drawing and Machine Design* (1945), 1912.

CHARLES WICKLINE HILL, B.S.AGR., *Associate Professor of Rural Organization* (1946), 1937.

LYDIA IRENE HINKEL, MUS.B., *Associate Professor of Music* (1939), 1921.

TORKEL HOLSOE, M.F., *Associate Professor of Silviculture* (1946), 1938.

HAROLD MARTENEY HYRE, M.S., *Associate Professor of Poultry Husbandry* (1944), 1931.

BENJAMIN KEEN, PH.D., *Associate Professor of History* (1946).

FORREST ELWOOD KELLER,[2] M.A., *Associate Professor of Economics* (1941), 1936.

JOHN JOSEPH LAWLESS, PH.D., M.D., *Associate Professor of Medicine* (1944), 1935.

MARLYN EDWARD LUGAR,[3] A.B., LL.B., *Associate Professor of Law* (1947), 1939.

WARREN FRANCIS MANNING, A.B., A.M., PH.D., *Associate Professor of French* (1945), 1928.

ELMER MAYSE MILLION,[5] A.B., LL.B., J.S.D., *Associate Professor of Law* (1946).

WILLIAM SHERMAN MINOR, A.B., D.B., *Associate Professor of Philosophy* (1946).

CHARLES MITRANI, PH.D., *Associate Professor of Romance Languages* (1931), 1921.

NELL NESBITT, A.M., *Associate Professor Emeritus of Home Economics* (1946), 1923.

DAVID W. NORTHUP, A.M., PH.D., *Associate Professor of Physiology* (1938), 1935.

CHARLES EDWIN PATTON, A.M., *Associate Professor of Art* (1941), 1939.

JAMES IRVING REYNOLDS, B.S.M.E., *Associate Professor of Mechanical Engineering* (1947), 1942.

EVAN OWEN ROBERTS, A.B., M.A., PH.D., *Associate Professor of Economics and Business Administration* (1945), 1929.

IRA ERRETT RODGERS, A.B., *Associate Professor of Physical Education* (1945), 1926.

JACOB SAPOSNEKOW, M.A., *Associate Professor of Sociology* (1941), 1924.

CHARLES BORUM SEIBERT, B.S.E.E., M.S., *Associate Professor of Electrical Engineering* (1944), 1934.

PETER DAVID SHILLAND, B.A., M.A., PH.D., *Associate Professor of Economics* (1946).

JOHN MADISON SLACK, B.A., M.S., PH.D., *Associate Professor of Bacteriology and Public Hygiene* (1946).

CLARK KENDALL SLEETH, A.B., B.S., M.D., *Associate Professor of Physical Diagnosis and Medicine* (1946), 1935.

JOSEPH K. STEWART, PH.D., *Associate Professor of Mathematics* (1946), 1930.

ALBERT LEE STURM, A.B., A.M., PH.D., *Associate Professor of Political Science* (1946).

RICHARD HUYETTE SUDDS, B.S., M.S., PH.D., *Associate Professor of Horticulture* (1946).

CARLTON FULTON TAYLOR, PH.D., *Associate Professor of Plant Pathology* (1945), 1938.

GEORGE E. TOBEN, M.S., *Associate Professor of Agricultural Economics* (1946).

PATRICK ANTHONY TORK, M.S., *Associate Professor of Physical Education* (1947), 1943.

EDWARD HENRY TYNER, PH.D., *Associate Professor of Agronomy* (1943), 1938.

COLLINS VEATCH, PH.D., *Associate Professor of Genetics* (1945).

ADOLPH JAMES WEISER,[2] MUS.B., MUS.M., *Associate Professor of Music* (1944).

DANA WELLS, M.A., *Associate Professor of Geology* (1945), 1930.

RALPH H. WHERRY,[7] A.B., M.A., C.L U., *Associate Professor of Economics and Business Administration* (1945), 1940.

HENRY W. WOOLARD, B.S.E.(AERO), *Associate Professor of Aeronautical Engineering* (1947), 1946.

KENNETH WOOD, MUS.M., *Associate Professor of Violin and Ensemble* (1941), 1928.

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[1]Resigned September 30, 1946.
[2]Resigned August 31, 1946.
[3]On leave of absence, September 1, 1946, to January 15, 1947.
[4]Deceased November 25, 1946.
[5]On leave of absence, 1947-48.
[6]Resigned May 31, 1947.
[7]Resigned August 31, 1947.

Assistant Professors

RICHARD ATKINS ACKERMAN, B.S., M.S., *Assistant Professor of Dairy Husbandry* (1946), 1928.

ORVAL JAMES ANDERSON, A.M., *Assistant Professor of English* (1947), 1941.

FORD LEWIS BATTLES, A.B., A.M., *Assistant Professor of English* (1945), 1940.

WILLIAM DERRICK BARNS, A.B., A.M., *Assistant Professor of History* (1947), 1940.

KENNETH BELL, B.J., M.A., *Assistant Professor of Journalism* (1944).

KERMIT B. BLANEY, B.S.AGR., *Assistant Professor of Military Science and Tactics* (1946).

JAMES KARL BLETNER, B.S., *Assistant Professor of Poultry Husbandry* (1946), 1935.

SAMUEL BOYD, JR., B.D.A., *Assistant Professor of Speech* (1946), 1943.

WALTER MARION BROADFOOT,[1] *Assistant Professor of Agronomy and Genetics* (1946), 1936.

CLIFFORD W. BROWN, B.S., M.A., *Assistant Professor of Music* (1947), 1942.

SARA ANN BROWN, B.S., M.S., *Assistant Professor of Home Economics Education* (1946).

J. NED BRYAN, JR., M.A., *Assistant Professor of Physics* (1946), 1936.

JACK B. BYERS, B.S., *Assistant Professor of Forest Utilization* (1946), 1941.

JOHN D. CARTER, PH.D., *Assistant Professor of History* (1947).

GENEVIEVE BERNICE CLULO, A.M., *Assistant Professor of Plant Pathology* (1943), 1932.

MARGARET BUCHANAN COLE, A.B., PH.D., *Assistant Professor of Mathematics* (1942), 1938.

GEORGE HENRY COLEBANK, M.A., *Assistant Professor of Education* (1928).

RALPH WILLIAM CONRAD, A.B., *Assistant Professor of Physics* (1946).

RAYMOND DEAN COOL,[2] PH.D., *Assistant Professor of Chemistry* (1946).

ALLEN BYRON CUNNINGHAM, PH.D., *Assistant Professor of Mathematics* (1946), 1935.

MONTELLE DIETRICH, M.S., *Assistant Professor of Home Economics* (1941), 1929.

R. FRANKLIN DUGAN, M.F., *Assistant Professor of Wildlife Management* (1943), 1942.

ARTHUR PINGREE DYE, B.S., M.S.AGR., *Assistant Professor of Horticulture* (1941), 1923.

ROY E. EMERSON, B.S., M.S., *Assistant Professor of Agricultural Engineering* (1946), 1940.

CLYDE NEVILLE ENGLISH, B.A., M.S.M., *Assistant Professor of Music* (1945).

MARGARET ERLANGER,[3] M.A., M.S., *Assistant Professor of Physical Education* (1946), 1937.

JAMES W. EVANS, JR., *Assistant Professor of Military Science and Tactics* (1947).

HAROLD V. FAIRBANKS, M.S., *Assistant Professor of Chemical Engineering* (1947).

RUEL E. FOSTER, A.B., M.A., PH.D., *Assistant Professor of English* (1946), 1942.

THOMPSON R. FULTON, M.A., *Assistant Professor of Social Work* (1946).

PATRICK WARD GAINER, PH.D., *Assistant Professor of English* (1946).

JAMES L. HALL, PH.D., *Assistant Professor of Chemistry* (1946).

GEORGE W. HAWKINS, *Assistant Professor of Military Science and Tactics* (1946).

LYDIA IRENE HINKEL, MUS.B., *Assistant Professor of Education* (1939), 1921.

MARGARET E. HOFFMANN, A.B., M.A., *Assistant Professor of Public Welfare* (1944), 1943.

JOHN HEYWOOD HOLDEN, B.S.CH.E., M.S.CH.E., *Assistant Professor of Chemical Engineering* (1945).

HELEN ROSE HOLLAND, A.B., B.M., MUS.M., *Assistant Professor of Music* (1945), 1940.

BEATRICE HURST, M.A., *Assistant Professor of Physical Education* (1935), 1928.

PAUL R. JONES, M.S. IN CERAMICS, *Assistant Professor of Chemical Engineering* (1947), 1946.

JOSEPH L. KNAPP, B.S., M.D., *Assistant Professor of Psychiatry* (1947).

HAROLD NEELY KERR, A.B., M.LITT., *Assistant Professor of Sociology* (1947), 1946.

JOSEPH W. KOHNSTAMM, *Assistant Professor of Military Science and Tactics* (1947).

EDWIN DONALDSON KOONS,[4] PH.D., *Assistant Professor of Geology* (1946).

VICTOR JACOB LEMKE, A.B., A.M., PH.D., *Assistant Professor of German* (1941), 1939.

JOHN CHARLES LUDLUM, PH.D., *Assistant Professor of Geology* (1946).

ARTHUR COOK MCBRIDE, A.B., M.A., *Assistant Professor of French* (1941), 1926.

JAMES R. MACDONALD,[1] PH.D., *Assistant Professor of Chemical Engineering* (1943).
BERNARD R. MCGREGOR, B.S.ED., *Assistant Professor of Music* (1946).
ABRAHAM STANLEY MARGOLIN, PH.D., *Assistant Professor of Biology* (1947), 1936.
TOM L. MARSHALL, B.S.AGR., *Assistant Professor of Military Science and Tactics* (1946).
GEORGE RALPH MAXWELL, B.S., M.D., *Assistant Professor (part time) of Physical Diagnosis* (1936), 1924.
KENNETH HOLDEN MURPHY, A.B., M.S., *Assistant Professor of Mathematics* (1947), 1939.
OLIVER MEADER NEAL, B.S., *Assistant Professor of Horticulture* (1947), 1942.
GEORGE NORRIE, JR., *Assistant Professor of Military Science and Tactics* (1946).
MARY NADINE PAGE, M.A., *Assistant Professor of English* (1946), 1925.
BETH MAE PALMER, M.S., *Assistant Professor of Home Economics* (1927).
JEANNE PARIS, M.A., *Assistant Professor of Home Economics* (1946), 1945.
ILAND DEE PETERS, M.S., *Assistant Professor of Mathematics* (1947), 1941.
HELEN PURINTON PETTIGREW, PH.D., *Assistant Professor of English* (1941), 1919.
WARD F. PORTER, JR., A.B., *Assistant Professor of Agricultural Economics* (1947).
BLANCHE E. PRICE, M.A., *Assistant Professor of Home Economics* (1945).
CECIL BENJAMIN PRIDE, A.B., M.D., *Assistant Professor (part time) of Surgery* (1936), 1926.
ALSTON LEE REED, B.S.E.E., *Assistant Professor of Electrical Engineering* (1946).
ELIZABETH FROST REED, A.M., *Assistant Professor of English* (1945), 1919.
FLORENCE K. REESE, A.B., M.A., B.S. LIBR. SERV., *Assistant Professor of Library Science* (1946), 1935.
DONALD DIRK RITCHIE, A.B., B.S., M.A., *Assistant Professor of Biology* (1946), 1938.
LYDIA ROESCH, PH.D., *Assistant Professor of German* (1935), 1925.
DAVID SALKIN, M.D., *Assistant Professor of Medicine and Surgery* (1943), 1936.
GREEK SAYRE, M.A., *Assistant Professor of English* (1941), 1918.
JOHN SEMON, B.S.P.E., M.S., *Assistant Professor of Physical Education* (1947), 1943.
FRANK WILLARD SCHALLER, B.S., M.S., *Assistant Professor of Agronomy* (1946), 1937.
ARMAND EDWARDS SINGER, A.B., A.M., PH.D., *Assistant Professor of Romance Languages* (1947), 1940.
ARTHUR NEWELL SMITH, A.B., *Assistant Professor of Physical Education* (1931), 1923.
SARA R. SMITH, PH.D., *Assistant Professor of History* (1947), 1946.
VIVIAN SORELLE, A.B., M.A., *Assistant Professor of Journalism* (1944), 1943.
JOHN CLIFFORD STICKNEY, B.S., M.S., PH.D., *Assistant Professor of Physiology* (1945), 1940.
KARINA THURE,[2] M.S., *Assistant Professor of Home Economics* (1945), 1943.
WILBUR JONES TYLER, B.S., M.S., PH.D., *Assistant Professor of Dairy Husbandry* (1947), 1945.
EARL HAVEN TRYON, B.S., M.S., PH.D., *Assistant Professor of Silviculture* (1945).
JOHN R. VAUGHN,[5] B.S., M.S., *Assistant Professor of Plant Pathology* (1945), 1941.
MARVIN LEWIS VEST, M.S., *Assistant Professor of Mathematics* (1943), 1931.
FRANKLIN GEORGE WADE, A.B., B.S., M.D., *Assistant Professor of Pathology* (1946).

SAMUEL JOSEPHUS WEESE, B.S., M.A., *Assistant Professor of Dairy Husbandry* (1945).

EDWIN J. WHITE, JR., *Assistant Professor of Military Science and Tactics* (1946).

FREDERICK RENDELL WHITTLESEY, M.D., *Assistant Professor (part time) of Medicine* (1942), 1930.

THOMAS WALLEY WILLIAMS, B.S., M.S., PH.D., *Assistant Professor of Anatomy and Histology* (1944).

DOUGLAS B. WILLIAMSON, B.A., M.A., *Assistant Professor of Physics* (1946).

DONALD THOMPSON WORRELL, B.S.E.E., M.S.E.E., *Assistant Professor of Mathematics* (1946), 1941.

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[1]Resigned September 15, 1946.
[2]Resigned September 1, 1946.
[3]On leave of absence, September 1, 1946, to January 15, 1947.
[4]Resigned January 15, 1947.
[5]Resigned April 30, 1947.

Instructors

LILLIAN ALLEN, M.A., *Instructor in English* (1947); 1946.

EVELYN ANDERSON, M.A., *Instructor in Speech* (1947).

K. STUART ARMSTRONG, M.A., *Instructor in English* (1946).

JO MATHER AULL, *Instructor (part time) in Art* (1945).

JOHN E. BAILEY,[5] B.S.E.E., *Instructor in Physics* (1946).

WALTER W. BAKER, B.S.CH.E., *Instructor in Chemical Engineering* (1947), 1946.

W. HUGHES BARNES, M.A., *Instructor in Extension* (1946).

EDWARD PETER BARTKUS, B.S.CH.E., *Instructor in Chemical Engineering* (1947), 1945.

FRANCES ISABEL BASON,[1] B.S., *Instructor in Physical Education* (1944).

LLOYD EDWARD BEVINS, A.B., M.A., *Instructor in English* (1946).

GERTRUDE CLARK BLACKWOOD, B.S., *Instructor in Psychology* (1947), 1945.

EDYTHE BLUMERT, B.S., M.A., *Instructor in English* (1946).

SALLIE SHREWSBURY BOARD, A.B., A.M., *Instructor in English* (1945).

DONOVAN HINER BOND, B.S.J., *Instructor in Journalism* (1946).

THOMAS J. BRENNAN, B.S.ED., *Instructor in Education* (1947), 1941.

IRENE VAUGHN BRISSEY,[1] *Instructor in Botany and Zoology* (1946).

TERESA MARIE BRODERICK, A.M., *Instructor in English* (1946).

JERRY CAMERON BURCHINAL, B.S.C.E., *Instructor in Civil Engineering* (1946).

RUSSELL CLARKE BUTLER, B.S.AGR., M.S., *Instructor in Education* (1944).

WILLIAM JOHN CARL, *Instructor in Foundry Practice and Pipe Fitting (limited service)* (1943), 1920.

ELIZABETH W. CARROLL,[2] A.B., A.M., *Instructor in English* (1945).

BERENICE COE,[1,2] A.B., M.A., *Instructor in English* (1946).

OLIVE W. COFFROTH,[3] M.A., *Instructor (part time) in English* (1946).

LUCY MAY COPLIN,[4] A.M., *Instructor in Education* (1931), 1925.

HAZEL RUTH COUTTS, M.A., *Instructor in Business Administration* (1943).

TYREECA DAVIS, A.M., *Instructor in Mathematics* (1946).

ARTHUR PAUL DAVISSON, B.S., A.B., M.S., *Instructor in Biology* (1946).

ORETA HOLBERT DAWSON, A.B., *Instructor in English* (1947), 1946.

H. MARTIN DETURK,[5] B.S.I.E., *Instructor in Machine Drawing and Design* (1941).

DAVID WILLIAM DOWDELL, A.B., *Instructor in English* (1947), 1946.

JOHN DIXON DOWNES, JR., B.S.AGR., *Instructor in Horticulture* (1943).
CARL RAY DUNCAN,[6] B.S.C.E., *Instructor (part time) in Civil Engineering* (1945).
DONALD W. EICHER, A.B., M.S., *Instructor in Education and Physical Education* (1946), 1942.
JOHN THOMAS EVANS,[7] A.B., B.MUS., M.MUS., *Instructor (part time) in Instrument Classes* (1943).
STANLEY FARR, B.S., *Instructor in Physics* (1947).
GEORGE ANDREW FEDERER, JR., M.A., *Instructor in Education* (1934), 1928.
HOMER FIZER, B.S.P.E., *Instructor in Physical Education* (1947), 1940.
VIRGINIA SHEWEY FLANIGAN,[13] B.A., M.A., *Instructor in Social Science* (1946).
ISABELLE T. GADZIKOWSKY, M.D., *Instructor in Medicine (Hopemont)* (1946).
THELMA T. GILMAN,[7] M.A., *Instructor in Psychology and Philosophy* (1945).
ELIZABETH ALICE GOODALL, B.S., *Instructor in Extension* (1945).
RALPH HORACE GREEN,[6] B.S.E.E., *Instructor in Electrical Engineering* (1945).
ENID VERONA HALLER,[10] A.B., *Instructor in Speech* (1946), 1945.
MARGARET G. HARTSON, A.B., M.S., *Instructor in Home Economics* (1946).
RUTH WHEELER HATFIELD, A.B., A.M., *Instructor in English* (1944).
GEORGE S. HENRY, *Flight Instructor* (1944).
FRANK HERRERA Y SANCHEZ, A.M., *Instructor in Spanish* (1946).
JAMES BLAKE HICKMAN, B.S.CHEM., M.S., *Instructor in Chemistry* (1946), 1941.
IRVIN EDWARD HOWELL, A.B., *Instructor in Physical Education* (1947).
THOMAS WILLIAM HOWARD, B.S.E.M., *Instructor in Mining Engineering* (1946).
OLIVER IKENBERRY, PH.D., *Instructor in Extension* (1946).
CARL E. JOHNSON, M.D., *Instructor (part time) in Medicine* (1941).
LLOYD EVERETT JONES, *Instructor in Mechanical Engineering* (1946), 1937.
LOYAL H. JONES, B.A., M.S., *Instructor in Biology* (1946).
MARY ROSE JONES,[1] B.S., *Instructor (part time) in Home Economics* (1946), 1941.
JAMES ALBERT KAPNICKY,[1] B.S.CH.E., *Instructor (part time) in Mechanical Engineering* (1946).
EVERETT LEE KEENER,[9] B.S.E.E., *Instructor in Electrical Engineering* (1946).
WILLIAM FRANKLIN KERN, A.B., *Instructor in Physical Education* (1943).
NICHOLAS KOBZAREFF, B.S., S.T.D., *Instructor in Slavonic Languages* (1944).
JEAN BAUMAN LAMBERT, B.S., *Instructor in Speech* (1946).
WILLIAM S. LENNON,[5] M.A., *Instructor in Economics and Business Administration* (1946), 1941.
CHARLES LEWIS,[5] A.B., M.S., *Instructor in Bacteriology* (1943).
WILLIAM ALLAN LUNK, A.B., M.S., *Instructor in Zoology* (1946).
GERTRUDE MCALLISTER, M.S., *Instructor in Home Economics* (1945).

[1]Resigned May 31, 1946.
[2]Resigned January 15, 1947.
[3]Resigned January 21, 1946.
[4]On leave of absence, 1946-47.
[5]Resigned September 1, 1946.
[6]Resigned November 30, 1945.
[7]Resigned January 31, 1946.
[9]Resigned May 31, 1947.
[10]Resigned April 5, 1947.
[12]Resigned April 30, 1947.
[13]Resigned August 31, 1947.

KATHLEEN MCGILLICUDDY,[5] M.S., *Instructor in Home Economics and Assistant Teacher Trainer* (1945).

VIRGINIA CHRISMAN MCWHORTER,[9] *Instructor in Music* (1940), 1935.

MAVIS MANN, M.A., *Acting Instructor in Political Science* (1947).

GLENN FAYETTE MARTIN, *Instructor in Machine Shop and Welding Practice* (1940).

MINNIE JANE MERRELLS, PH.D., *Extension Instructor in English* (1946).

WEBSTER EARL MILLER, M.A., *Instructor in Chemistry* (1946).

WILLIAM E. MOCKLER, M.A., *Instructor in English* (1946).

MARY S. MONTGOMERY, M.A., *Instructor in English* (1947).

SUSAN MAXWELL MOORE, A.B., *Instructor Emeritus in Piano and Sight Playing* (1937), 1903.

AUGUSTA MARIE O'DONALD MORGAN, A.B., M.A., *Instructor in English* (1946).

JAMES SIDNEY MURPHY, B.S.AE.E., *Instructor in Mechanical Engineering* (1946).

VELDA NOLAND,[3] M.A., *Instructor (part time) in English* (1946).

RUTH MAXWELL PALMER, B.S.H.E., M.S., *Instructor in Home Economics* (1947), 1945.

LEE PATTON, *Instructor in Physical Education* (1945).

WILLIAM P. PIERCE,[9] B.S.M.E., *Instructor in Mechanical Engineering* (1946).

PETER POPOVICH, M.S., *Instructor in Chemistry* (1946).

JAMES STANLEY POUNDSTONE, *Instructor in Mining Extension* (1924).

ROBERT J. PRENDEVILLE,[9] B.A., M.A., *Instructor in Speech* (1946).

AARON H. RAPKING, JR., M.S., *Instructor in Education* (1947), 1946.

HARVEY N. REXROAD, JR., B.S.E.E., *Instructor in Physics* (1947).

EMMA JANE RHODES, B.M. IN PIANO, M.M., *Instructor in Music* (1946), 1942.

FRED SMITH ROBIE,[9] B.A., *Instructor in Speech* (1946).

GARNET JAMISON ROGERS, M.A., *Instructor in Education* (1940).

CHARLES A. ROSS,[9] M.S., *Instructor in Pharmacology* (1946).

WILLIAM ROBERT ROSS, A.B., M.A.,[2] *Instructor in Political Science* (1941), 1938.

ERNEST JAMES SANDY, B.S.E.M., *Instructor in Mining Engineering* (1946).

MORTON SANTYMIRE, B.S., *Instructor in Physical Science* (1946).

RAYMER EGBERT SEAMAN, *Instructor Emeritus in Woodworking and Foundry Practice* (1945), 1912.

ELIZABETH SHEPPARD, B.A., *Instructor in Speech* (1946).

MARY IRENE SHIVELY,[9] B.M., *Instructor (part time) in Music* (1945).

ALLEN SIMMONS,[8] B.S.C.E., *Instructor in Civil Engineering* (1945).

GRACE MARTIN-SNEE, B.M., *Instructor Emeritus in Piano and Pipe Organ* (1945), 1898.

SYLVIA JOSEPHINE SOUPART, M.A., *Instructor Emeritus in Education* (1945), 1925.

JOHN ALBERT SOUTHERN,[3] PH.D., *Instructor in Chemistry* (1946).

BERNARD J. SPARLIN,[6] B.S.E.E., *Instructor in Electrical Engineering* (1945).

HARRY H. STEPHENS, B.S.C.E., *Instructor in Civil Engineering and Mechanics* (1946), 1943.

JUNE METZ THORN, B.S.P.E., *Instructor in Physical Education* (1945).

REBECCA WADE, A.M., *Instructor in Romance Languages* (1945).

JACK WAYNE WARFIELD, B.A., M.A.,[9] *Instructor in Speech* (1946).

WILLIAM ALBERT WASEMANN,[11] B.S.M.E., *Instructor in Mechanical Engineering* (1946).

DOROTHY MARIE WATSON, M.A., *Instructor in Education* (1947), 1943.
JOHN RAYMOND WEBB, M.S., *Instructor in Agronomy* (1947), 1941.
LOIS REDFORD WE'LEN, B.S., M.S., *Instructor in Home Economics* (1946).
RUFUS ASA WEST, *Instructor in Metal-working (limited service)* (1933), 1892.
CHARITY WHITE, A.B., *Instructor in Physical Education and Athletics* (1946), 1945.
RALPH M. WHITE, A.B., LL.B., *Instructor in Political Science* (1945), 1940.
MAY LANDSTREET WILT, M.A., *Instructor in Education* (1931), 1924.
RICHARD HENRY WILT, A.B., *Instructor in Art* (1946).
ALBERT FREDDIE WOJCIK, B.S.PHAR., *Instructor in Pharmacy* (1945).
CHARLES PETER YOST, B.S.P.E., *Instructor in English* (1946).

[2]Resigned January 15, 1947.
[3]Resigned January 21, 1946.
[5]Resigned September 1, 1946.
[6]Resigned November 30, 1945.
[8]Resigned December 31, 1945.
[9]Resigned May 31, 1947.
[11]Resigned August 31, 1947.

Lecturers

GEORGE R. FARMER, LL.B., *Lecturer in Business Law* (1946).
KEITH GERCHOW, M.D., *Lecturer in Social Work* (1946).
JOHN HELMICK, M.D., *Lecturer in Social Work* (1946).
CARL E. JOHNSON, M.D., *Lecturer in Social Work* (1942).
M. F. KIRSCH, C.P.A., *Lecturer in Accounting* (1946).
OSCAR DOANE LAMBERT, PH.D., *Lecturer in History* (1946), 1945.
C. H. LAYMAN, D.D.S., *Lecturer in Social Work* (1945).
VIRGIL GREENE LILY,[1] PH.D., *Lecturer in Chemistry* (1946).
JUSTUS PICKETT, M.D., *Lecturer in Social Work* (1945).
HARRY V. THOMAS, M.D., *Lecturer in Social Work* (1942).
ELDON BRYANT TUCKER, M.D., *Lecturer in Anesthesiology* (1937).

[1]September 15, 1946, to January 15, 1947.

Fellows, Assistants, and Technicians*

HELEN LOUISE AMBLER, B.S., *Teaching Fellow in Mathematics* (1946).
LIBERTY MARIAN ANTALIS, A.B., *Teaching Fellow in English* (1946).
MARY ROGERS ASHBURN, A.B., *Teaching Fellow in English* (1946).
HARRY PHILLIP BAHRICK, B.A., *Teaching Fellow in German* (1946).
JAMES DAVID BAILEY, B.S., *Teaching Fellow in Economics and Business Administration* (1946).
ELEANOR ELIZABETH BARNARD, B.S., *Teaching Fellow in Economics and Business Administration* (1946).
ELIZABETH ANN BARTHOLOMEW, A.B., *Herbarium Assistant* (1941), 1938.

*For additional names see the sections on "Other Administrative Officers," "Student Health Service," "Agricultural Experiment Station Staff," and "Mining and Industrial Extension Staff."

Daisy Walters Bell, B.S., *Teaching Fellow in English* (1946).
Elizabeth Thompson Beyer, A.B., *Teaching Fellow in English* (1947).
Agnes Blake, B.S., *Research Assistant (part time) in Plant Pathology and Bacteriology* (1946).
Wilbur Harris Blum, B.S., *Teaching Fellow in Mathematics* (1946).
William Franklin Boldridge, B.S., M.S., *Teaching Fellow in Chemistry* (1946).
Thomas Munn Bole, Jr., A.B., *Teaching Fellow in English* (1946).
Marian Wilson Brannan, A.B., M.A., *Teaching Fellow in English* (1946).
Mary Susan Brown, B.S., *Teaching Fellow in English* (1946).
Ralph Clinton Brown, Jr., B.S., *Teaching Fellow in Mathematics* (1946).
Russell Woodrow Castle, A.B., *Teaching Fellow in Economics and Business Administration* (1946).
Louise Livingston Chapman, B.S., *Teaching Fellow in English* (1946).
Dorothy M. Collett, B.S., *Teaching Fellow in Chemistry* (1947).
Robert A. Crichton, B.S., *Teaching Fellow in Economics and Business Administration* (1947).
Earl Hicks Crisler, B.S.Ch., *Teaching Fellow in Mathematics* (1946).
Max Wayne Carl Cubbon, A.B., *Teaching Fellow in English* (1946).
Abel F. DeWitt, B.S.Ed., *Graduate Assistant in Education* (1946).
Winthrop Cecil Difford, B.S., *Teaching Fellow in Geology* (1946).
William A. Dilgard, A.B., *Teaching Fellow in History* (1946).
Marjorie Smith Durling, B.S., *Teaching Fellow in English* (1946).
Ruth Eskew, A.B., *Teaching Fellow in English* (1946).
Stanford Fertig, B.S.Agr., *Graduate Assistant in Agronomy and Genetics* (1946).
John P. Foley, B.S., *Graduate Assistant in School of Physical Education and Athletics* (1946).
Eleanor Ford, B.S., M.S., *Teaching Fellow in Physics* (1947).
Carol Leyman French, B.A., *Teaching Fellow in English* (1946).
Emma Jane Freshwater, B.S., *Teaching Fellow in Economics and Business Administration* (1946).
Mary Gibson, B.S.Ed., *Research Assistant in Plant Pathology* (1946).
Earl Goodwin, B.S., *Teaching Fellow in Economics and Business Administration* (1947).
Helen McCue Goodykoontz, B.S., *Graduate Assistant in Home Economics* (1946).
Janis Gover, A.B., *Assistant (part time) in Biochemistry* (1946).
Robert Paul Haden, B.S.Ch.E., *Teaching Fellow in Mathematics* (1946).
Betty Snyder Hall, A.B., *Teaching Fellow in Speech* (1946).
Martha Woofter Hall, B.S., *Teaching Fellow in English* (1946).
Phyllis Hamilton, A.B., *Teaching Fellow in Psychology* (1946), 1945.
Susan C. Harnish, A.B., *Teaching Fellow in English* (1946).
Dora Lee Harris, B.S.Ch., *Teaching Fellow in Mathematics* (1946).
Helen Maxine Heater, A.B., *Teaching Fellow in Mathematics* (1946).
Ethel Shreffler Heebink, A.B., *Teaching Fellow in English* (1946).
Mary Betty Parker Herrera, A.B., M.A., *Teaching Fellow in Romance Languages* (1946).
Helen Hess, A.B., *Assistant (part time) in Anatomy* (1946).

DAVID BEST HOLDEN, A.B., *Teaching Fellow in Economics and Business Administration* (1946).

B. R. HONECKER, B.S., *Teaching Fellow in Economics and Business Administration* (1947).

JAMES ROBERT HUNTSBERGER, B.S., *Teaching Fellow in Chemistry* (1946).

KENNETH JOHNSTON, B.S.AGR., *Graduate Assistant in Dairy Husbandry* (1946).

JACQUELINE HOOD JONES, A.B., *Teaching Fellow in Psychology* (1946).

MARJORIE JONES, A.B., *Teaching Fellow in Romance Languages* (1947).

FORREST E. JUSTIS, A.B., *Teaching Fellow in Mathematics* (1946).

MARGARET MCNEMAR KING, A.B., *Teaching Fellow in English* (1946).

ELIZABETH LANG, B.S., *Graduate Assistant in School of Physical Education and Athletics* (1946).

LYDIA S. LEMKE, B.A., *Teaching Fellow in German* (1946).

BARBARA LEIGH LEMLEY, A.B., *Teaching Fellow in English* (1946).

LUCY W. LOWRY, DIPLOMA, *Assistant in Music* (1946).

MARGUERITE MCBRIDE, *Teaching Fellow in Romance Languages* (1947).

KATHRYN BELLE MCGEE, B.S., *Assistant in Biochemistry* (1946).

BLANCHE JEAN MCQUISTON, A.B., M.A., *Teaching Fellow in Physics* (1946).

AGNES MARY MINOR, A.B., *Teaching Fellow in English* (1946).

CLAYTON MONTGOMERY, JR., B.A., M.A., *Teaching Fellow in English* (1946).

ZELLA MAE MOORE, B.S., *Teaching Fellow in Mathematics* (1945).

ALLEN E. MURPHY, A.B., *Teaching Fellow in Geology* (1947).

RALPH THOMAS MYERS, A.B., *Teaching Fellow in Chemistry* (1946).

REBECCA NAY NARICK, B.S., M.L., *Teaching Fellow in Psychology* (1946).

ELIZABETH WALTON NASH, A.B., *Teaching Fellow in Speech* (1946).

JOHN FREDERICK OLLOM, B.S., *Teaching Fellow in Mathematics* (1946).

VIRGINIA TAYLOR PERRY, A.B., *Teaching Fellow in English* (1946).

ROBERT W. PITTS, B.S.AGR., *Graduate Assistant in Animal Husbandry* (1946).

WILLIAM RANDALL, A.B.ED., *Assistant in School of Music* (1946).

HENRY ELTON REED, B.S.CH.E., *Graduate Assistant in Chemical Engineering* (1946).

ROBERT F. RIGGS, B.S. ELECTRONICS ENG., *Teaching Fellow in Physics* (1946).

FRED E. ROSS, A.B., M.S., *Teaching Fellow in Biology* (1946).

CHARLES MICHAEL RUNNER, *Stationary Engineer and Laboratory Assistant in Mechanical Engineering* (1945), 1919.

ETHEL RUTH SELIGMAN, B.A., M.A., *Teaching Fellow in Romance Languages* (1946).

MACIE LILLY SHUGROU, A.B., *Teaching Fellow in English* (1946).

MARY M. SHURTLEFF, A.B., A.M., *Teaching Fellow in Mathematics* (1946).

MARY WHITE SINGER, PH.D., *Teaching Fellow in Classics* (1946).

GENEVIEVE POLAND SMELL, A.B., M.A., *Teaching Fellow in Biology* (1946).

GENE HOPE SMITH, A.B., M.S., *Teaching Fellow in Zoology* (1946).

JOSEPH P. SOLLARS, B.S.ED., *Teaching Fellow in Economics and Business Administration* (1946).

BLANCHE STONESTREET, M.A., *Teaching Fellow in Mathematics* (1946).

WILLIAM H. STRADER, B.S.AGR., *Graduate Assistant in Horticulture* (1946).

ROBERT E. STROSNIDER, B.S.AGR., *Graduate Assistant in Agronomy and Genetics* (1946).

VIRGINIA BUTTS STURM, A.B., M.A., *Teaching Fellow in English* (1946).

JANE STEWART TAYLOR, B.S., *Teaching Fellow in Economics and Business Administration* (1946).

L. WAYNE THORNE, B.S., *Graduate Assistant in School of Physical Education and Athletics* (1946).

ELLEN ZINK VANDERVORT, A.B., M.S., *Teaching Fellow in Biology* (1946).

CHARLES ERNEST WALLS, *Laboratory Assistant and Mechanician in Chemical Engineering* (1945), 1938.

JACK WAYNE WARFIELD, B.A., M.A., *Assistant in Radio* (1946).

CARRIE CANTRALL WATERS, A.B., *Teaching Fellow in Psychology* (1945).

MARCEL WEINRICH, B.S., *Teaching Fellow in Mathematics* (1946).

JAMES R. WELSHONCE, B.S., *Teaching Fellow in Economics and Business Administration* (1947).

MERLE E. WILLIAMS, A.B., *Teaching Fellow in English* (1947).

BENJAMIN JAMES WILSON, B.S., *Assistant (part time) in Bacteriology* (1946).

HENRY WOOD, B.S., *Research Fellow in Chemistry* (1947).

MILLA ELIZABETH YOUNG, A.B., *Teaching Fellow in Romance Languages* (1946).

THE UNIVERSITY RURAL HIGH SCHOOL STAFF

GEORGE HENRY COLEBANK, M.A., *Principal* (1928).

ELLA LOUISE BOGGESS, M.A., *Vocational Home Economics* (1937), 1928.

THOMAS J. BRENNAN, B.S.Ed., *Industrial Arts* (1946), 1941.

ANNA BROCHICK, M.A., *English* (1939), 1938.

CLIFFORD W. BROWN, M.A., *Music* (1945).

RUSSELL CLARK BUTLER, M.S., *Vocational Agriculture* (1944).

MARY JANE CARRICO, B.S.H.E., *Home Economics* (1946).

LUCY M. COPLIN,[1] M.A., *Social Studies* (1931), 1925.

JAMES FREDERICK DAVIS,[2] M.S., *Science* (1935).

CATHERINE MCKELVEY DORSEY, A.B., *Mathematics* (1943).

DONALD WAYNE EICHER, M.S., *Physical Education* (1943).

GEORGE A. FEDERER, JR., M.A., *Science* (1934), 1928.

HOMER FIZER, B.S.P.E., *Physical Education* (1940).

ELIZABETH GATES, M.A., *Social Studies* (1943).

LILYAN KING GALBRAITH,[2] M.A., *Home Economics* (1944).

MARIE LOUISE MEYER, M.A., *Physical Education* (1944).

VICTORIA K. RADFORD,[3] A.B., *English* (1945).

AARON H. RAPKING, JR., M.S., *Science* (1946).

GARNET JAMISON ROGERS, M.A., *English* (1940).

KATE MEREDITH ROLLER, M.A., *Art* (1927).

MARY ALICE SEMON, M.A., *Junior High School Teacher* (1943), 1938.

BETTE HALL SHAHAN, B.S.Ed., *Library* (1945).

MADALENE E. SMITH, M.A., *Commerce* (1940).

BERNICE L. SMREK, M.A., *English* (1945).

SYLVIA JOSEPHINE SOUPART, M.A., *English (Emeritus)* (1945), 1924.

MARY JANE WASMUTH, B.MUS., *Music* (1943).

DOROTHY MARIE WATSON, M.A., *Commerce* (1943).

MAY L. WILT, M.A., *Mathematics* (1931), 1924.

MILDRED Y. WOOFTER, M.A., *English* (1937), 1936.

The University Laboratory Elementary School Staff

BLENDA L. PROUDFOOT, M.A., *Teacher, Intermediate Grades* (1943), 1939.
NELLIE R. BALIKER, M.A., *Teacher, Primary Grades* (1944).
MARY JANE WASMUTH, B.MUS., *Teacher, Music* (1943).

[1]On leave of absence, 1946-47.
[2]Resigned August 31, 1946.
[3]Substituting, 1946-47.

THE UNIVERSITY LIBRARY STAFF

ELMER M. GRIEDER, B.S.L.S., M.S., *Librarian* (1947).
WILLIAM PORTER KELLAM,[1] A.M., *Librarian* (1939).
LONNA DENNIS ARNETT,[6] PH.D., *Librarian Emeritus* (1935), 1910.
VIRGINIA ALICE ALEXANDER,[2] A.B. IN L.S., *Cataloguer* (1945), 1944.
FLEMING BENNETT,[8] A.B., B.S. IN L.S., *Chief Audio-visual Aids Librarian* (1946), 1942.
RUTH BLODGETT, A.B., *Assistant in Circulation Department* (1940), 1932.
JENNIE DELAWDER BOUGHNER, A.B., *Assistant Extension Service Librarian* (1946), 1932.
FORREST F. CARHART, JR., A.B., A.M. IN L.S., *Assistant Librarian* (1943).
MARYELLA DURIGG, A.B., A.B. IN L.S., *Senior Circulation Librarian* (1946).
ALMALYNE FLINT, A.B., B.S. IN L.S., *Senior Reference Librarian* (1947).
JESSIE GRIFFIN,[3] A.B. IN L.S., *Reference Librarian* (1940).
ALINE HYDER HARDWICK, B.S., *Assistant in Technical Processes Department* (1946).
EVELYN PRATT HITE, A.B., *Cataloguer (limited service)* (1944), 1922.
ELEANOR EDDY KNUTTI, *Head Extension Library (limited service)* (1944), 1922.
AIDA ROSE KRAVCIK,[1] B.S. IN L.S., *Assistant Reference Librarian* (1943).
OSCAR D. LAMBERT, PH.D., *Archival Consultant* (1946), 1945.
ELIZABETH LAWRENCE,[4] A.B., B.S. IN L.S., *Senior Catalogue Librarian* (1946).
LENORE C. LEDERER, A.B., B.S. IN L.S., *Junior Circulation Librarian* (1947).
HELEN LOAR, A.B., *Assistant in Audio-visual Aids Department* (1946).
ELIZABETH B. LYLE, A.B., B.S. IN L.S., *Senior Catalogue Librarian* (1947).
JESSIE B. MADIGAN, *Assistant in Technical Processes Department* (1932).
VIRGINIA MADIGAN, B.S., *Assistant in Reference Department* (1930).
ELIZABETH BROWNFIELD NEEL, *Assistant in Librarian's Office* (1936).
ELOISE FISHER NEWLON,[5] A.M., *Senior Catalogue Librarian* (1945).
BYRD LEA PICKENS, M.A., *Assistant Circulation Librarian (limited service)* (1945), 1930.
MARGARET VIRGINIA REAY,[1] B.S. IN L.S., *Head Extension Library Service* (1944), 1927.
FLORENCE K. REESE, A.M., *Assistant Professor of Library Science* (1946), 1935.
MARY VIRGINIA SWISHER, A.B., B.S. IN L.S., *Senior Reference Librarian* (1940).
ELIZABETH TARVER, A.B., B.S. IN L.S., *Chief Technical Processes Librarian* (1946).

[1]Resigned August 31, 1946.
[2]Resigned September 30, 1946.
[3]Resigned October 15, 1946.
[4]Resigned February 5, 1947.
[5]On leave, March 1 to June 30, 1947.
[6]Deceased April 15, 1947.
[8]Resigned September 30, 1947.

MARY ELIZABETH WATTLES, A.B., B.S. IN L.S., *Acting Chief Reference Librarian* (1946).

HARRIETT LOUISE FRENCH,[7] A.B., LL.B., *Librarian, College of Law* (1946).

[7]Resigned June 30, 1947.

THE WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION STAFF

CLAYTON ROBERTS ORTON, PH.D., SC.D., *Director* (1938), 1929.
RICHARD ATKINS ACKERMAN, M.S., *Assistant Dairy Husbandman* (1946), 1930.
WALTER WARDLAW ARMENTROUT, PH.D., *Agricultural Economist* (1934).
HORACE LESLIE BARNETT, A.B., M.S., PH.D., *Associate Mycologist* (1945).
ANTHONY BERG, M.S., *Associate Plant Pathologist* (1925), 1913.
LOWELL BESLEY, M.F., *Forester* (1946), 1938.
ROBERT HOWELL BLACK, M.S., *Associate Animal Husbandman* (1947), 1940.
JAMES KARL BLETNER, B.S., *Assistant Poultry Husbandman* (1946), 1935.
REED HOWARD BRADFORD,[1] M.A., *Associate Rural Sociologist* (1942).
WALTER MARION BROADFOOT,[2] M.S., *Assistant in Agronomy* (1936).
MAURICE GRAHAM BROOKS, M.S., *Forester* (1947), 1934.
DAVID ROYAL BROWNING,[3] M.A., *Assistant in Agronomy* (1941).
JACK B. BYERS, B.S.FOR., *Assistant Forester* (1946), 1940.
JOSEPH LINCOLN CARTLEDGE, PH.D., *Associate Geneticist* (1943), 1936.
WILLIAM HENRY CHILDS, M.S., PH.D., *Associate Horticulturist* (1944), 1931.
THOMAS BAIRD CLARK, M.S., *Associate Poultry Husbandman* (1943), 1927.
JAMES HARRIS CLARKE, M.S., *Associate Agricultural Economist* (1947), 1939.
GENEVIEVE B. CLULO, A.M., *Assistant Plant Pathologist* (1940), 1932.
ARTHUR R. COLMER, PH.D., *Associate Bacteriologist* (1945).
FERRIS DEWEY CORNELL, JR., PH.D., *Assistant Director* (1945), 1921.
CORNELIUS JETT CUNNINGHAM, B.S., *Assistant Animal Husbandman, in Charge of Reymann Memorial Farm (P. O. Wardensville)* (1943).
JOHN DIXON DOWNES, JR., B.S.AGR., *Assistant in Horticulture* (1943).
R. FRANKLIN DUGAN, M.F., *Assistant Forester* (1943), 1942.
ROBERT BARCLAY DUSTMAN, PH.D., *Agricultural Biochemist* (1929), 1924.
ARTHUR PINGREE DYE, M.S.AGR., *Assistant Horticulturist* (1941), 1923.
ROY E. EMERSON, B.S., M.S., *Assistant Agricultural Engineer* (1946), 1940.
HARVEY D. ERICKSON, PH.D., *Forester* (1947), 1937.
CLIFFORD AUTEN FLANDERS, M.A., *Assistant Biochemist* (1945).
SIDNEY LONGMAN GALPIN, PH.D., *Hydrologist* (1938), 1927.
EDWIN GOULD,[3] B.S.AGR., *Entomologist, in Charge of University Experiment Farm (P. O. Kearneysville)* (1946), 1929.
HARRY ORAM HENDERSON, PH.D., *Dairy Husbandman* (1928), 1919.
TORKEL HOLSOE, M.F., *Associate Forester* (1946), 1938.
GEORGE HYATT, JR., B.S., M.S., *Dairy Husbandman* (1947), 1941.
HAROLD MARTENEY HYRE, M.S., *Associate Poultry Husbandman* (1944), 1931.
GERALD JENNY, M.S., *Agricultural Editor* (1929).
JOHN CHARLES JOHNSTON, *Assistant to the Director* (1943), 1914.
JULIAN GILBERT LEACH, PH.D., *Plant Pathologist* (1938).

VIRGIL GREENE LILLY, PH.D., *Associate Physiologist* (1945), 1927.
EDWARD ALEXANDER LIVESAY, D.SC., *Animal Husbandman* (1919).
ALFRED DELBERT LONGHOUSE, B.S., M.S., *Agricultural Engineer* (1945), 1938.
CONLEY VERNON LOWTHER,[1] M.S., *Assistant in Plant Pathology* (1944).
PAUL LYON, *Technical Aid in Biochemistry* (1944).
GERTRUDE MCALLISTER, M.S., *Assistant in Home Economics* (1945).
MARK ANDREW MCHALE, B.S., D.V.M., *Assistant Animal Pathologist* (1945).
THEODORE CLINTON MCILVAINE,[3] PH.D., *Associate Agronomist Emeritus, in Charge of Lakin Experiment Farm (P. O. Lakin)* (1947), 1917.
ABRAHAM STANLEY MARGOLIN,[5] PH.D., *Assistant Hillculturist* (1936).
RAY STANLEY MARSH, M.A., *Horticulturist* (1936).
OLIVER MEADER NEAL, JR., B.S., *Assistant Horticulturist* (1947), 1942.
CHARLES THOMPSON NEFF, JR., A.B., *Comptroller* (1934).
WILBUR MARK NELSON,[6] A.R.P.S., *Photographer* (1939).
BOYD J. PATTON,[3] A.B., *Soil Scientist* (1945).
HELEN M. PAVLECH, B.S.ED., *Assistant in Animal Husbandry* (1943).
LEONARD MARION PEAIRS, PH.D., *Entomologist* (1911).
W. CLEMENT PERCIVAL, PH.D., *Forester* (1939), 1934.
GEORGE GORDON POHLMAN, PH.D., *Agronomist* (1938), 1930.
WARD F. PORTER, JR., A.B., *Assistant Rural Sociologist* (1947).
JOHN HARRISON RIETZ, D.V.M., M.S., *Animal Pathologist Emeritus* (1947), 1927.
MARY ALICE RYAN, A.B., *Assistant in Plant Pathology* (1944).
FRANK WILLARD SCHALLER, M.S., *Assistant Agronomist* (1946), 1937.
BURCH HART SCHNEIDER, PH.D., *Animal Husbandman* (1945), 1938.
RICHARD M. SMITH,[3] A.B., M.A., PH.D., *Soil Scientist* (1941).
RICHARD HUYETTE SUDDS, PH.D., *Associate Horticulturist* (1940), 1937.
CARLTON FULTON TAYLOR, PH.D., *Associate Plant Pathologist* (1945), 1938.
GEORGE E. TOBEN, M.S., *Associate in Farm Management* (1946).
EARL HAVEN TRYON, B.S., M.S., PH.D., *Assistant Silviculturist* (1945).
WILBUR JONES TYLER, B.S., M.S., PH.D., *Assistant Dairy Husbandman* (1947), 1945.
EDWARD HENRY TYNER, PH.D., *Associate Agronomist* (1943), 1938.
AUDREY HOWARD VANLANDINGHAM, PH.D., *Biochemist* (1946), 1929.
JOHN R. VAUGHN,[7] B.S., M.S., *Assistant Plant Pathologist* (1945), 1941.
COLLINS VEATCH, PH.D., *Associate Geneticist* (1945).
CHARLES EDWARD WEAKLEY, JR., M.A., *Associate Biochemist* (1938), 1907.
JOHN RAYMOND WEBB, M.S., *Assistant in Agronomy* (1947), 1941.
SAMUEL JOSEPHUS WEESE, B.S., M.A., *Assistant Dairy Husbandman* (1945).
KYLE CHESTER WESTOVER, PH.D., *Horticulturist* (1945), 1921.
MARION WHARTON, M.S., *Research Nutritionist* (1946).
CHARLES VINYARD WILSON, M.S., *Animal Husbandman* (1946), 1919.

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[1]Resigned September 30, 1946.
[2]Resigned September 15, 1946.
[3]In cooperation with the United States Department of Agriculture.
[4]Resigned January 1, 1945.
[5]Resigned January 15, 1947, to become Assistant Professor of Biology.
[6]Resigned March 15, 1947.
[7]Resigned April 30, 1947.

THE WEST VIRGINIA AGRICULTURAL EXTENSION DIVISION STAFF

JOHN OLIVER KNAPP,[1] B.S.AGR., *Director* (1938), 1917.

CHARLES C. ANDERSON, B.S., M.S., *Administrative Assistant, Program Planning* (1946).

WALTER WARDLAW ARMENTROUT, PH.D., *Extension Economist* (1941).

W. HUGHES BARNES, M.A., *Naturalist (P. O. Wheeling)* (1945).

WALDO E. BELL,[1] B.S.ENG., *Extension Agricultural Engineer* (1945).

MABEL FALES BEST,[2] A.B.H.EC., *Home Demonstration Agent at Large* (1945), 1935.

CHARLES FRANKLIN BISHOP,[1] M.S., *Assistant Extension Plant Pathologist* (1944), 1940.

ROBERT STUART BOAL,[1] B.S., *Extension Economist in Marketing* (1946), 1943.

ANNA MILDRED BOGGS,[1] A.B., *Assistant State Leader, Home Demonstration Work* (1936), 1927.

IRA BROOKS BOGGS,[1] *State Boys' Club Agent* (1933), 1926.

CARROLL BOND, A.B., *Assistant Extension Soil Conservationist (P. O. Jane Lew)* (1942).

KENNETH R. BOORD,[1] *Assistant Extension Editor* (1946), 1943.

LELAND BOOTH, B.S.AGR., *Associate Extension Editor* (1933).

HERMAN MCCLURE BOWERS,[1] B.S.AGR., *District Agent* (1942), 1929.

WILLIAM LEWIS CAMPBELL, B.S., *Extension Field Agent in Dairying* (1946).

ROGER LEE CHAMBLISS, JR.,[1] *Extension Economist in Farm Management* (1946), 1941.

ELOISE SNOWDEN COFER[1,4] A.B., M.S., *Extension Specialist in Foods and Nutrition* (1942).

BENJAMIN FRANKLIN CREECH,[1] B.S.AGR., *State Supervisor, Emergency Farm Labor; Extension Animal Husbandman* (1946), 1917.

CARLTON P. DORSEY,[1] B.S.AGR., *Assistant State Supervisor, Emergency Farm Labor; Associate State Club Leader* (1946), 1927.

R. FRANKLIN DUGAN,[1] M.F., *Extension Specialist in Wildlife Management (P. O. Buckhannon)* (1944), 1942.

RAY JEROME FRIANT,[1] B.S., *Extension Agronomist* (1929), 1922.

RUSSELL HENDERSON GIST,[1] B.S.AGR., *State Club Leader* (1933), 1924.

THOMAS DAVIS GRAY,[1] B.S.HORT., *Extension Landscape Architect* (1946), 1920.

CHARLES HENRY HARTLEY,[1] B.S.AGR., *State Club Leader* (1933), 1914.

TED ROBERT HASH,[3] B.S., *Assistant Extension Poultryman* (1945).

GERALD HEEBINK,[1] M.S., *Extension Dairy Husbandman* (1935).

HARRY ORAM HENDERSON, PH.D., *Dairy Husbandman* (1933).

FLORENCE HOWARD,[1] *State Girls' Club Agent* (1946), 1935.

GERTRUDE HUMPHREYS,[1] A.B., *State Leader, Home Demonstration Work* (1928), 1918.

CLAUDE RAY KEMPER,[5] B.S.AGR., *Extension Specialist in Vegetable Gardening* (1946).

RUTH KNOCH, M.S., *Home Demonstration Agent-at-large* (1946).

JULIAN GILBERT LEACH, PH.D., *Plant Pathologist* (1938).

JESSIE FORTNEY LEMLEY,[1] B.S.H.E., *Assistant State Leader, Home Demonstration Work* (1942), 1922.

EDWARD ALEXANDER LIVESAY, D.SC., *Animal Husbandman* (1933).

JANE LYMAN,[1] A.B., *Assistant Extension Editor, Radio (P. O .Wheeling)* (1945).
RAY STANLEY MARSH, M.A., *Horticulturist* (1936).
CHARLES THOMPSON NEFF, JR., A.B., *Comptroller* (1934), 1927.
WILBUR MARK NELSON,[6] A.R.P.S., *Assistant Extension Editor* (1939).
CHARLES K. PECK,[9] B.S.FOR., *Extension Forester* (1943), 1942.
HUGH WILLARD PRETTYMAN,[1] B.S.AGR., *Extension Horticulturist in Marketing (P. O. Inwood)* (1917).
IRA DEWARD PORTERFIELD, B.S., *Assistant Extension Dairyman* (1946).
WILLIAM HAVARD ROBERTS,[1] B.S., *District Agent* (1935).
JAMES EDWARD SAVILLE,[7] B.S.AGR., *Extension Poultryman* (1945).
GEORGE SHARPE,[1] B.S.AGR., M.S., *Extension Soil Conservationist* (1944), 1930.
BERTHA L. SHAW, *Assistant to Director* (1945), 1921.
EDWARD LEE SHAW, B.S.AGR., *Extension Sheep Specialist* (1917).
EVERETT CLIFTON SHERWOOD,[1,3] M.S., *Extension Plant Pathologist (P. O. Martinsburg)* (1920).
JOSEPH FELTON SILBAUGH,[8] B.S., *Assistant Extension Editor* (1946).
IRENE A. SPITZ,[1] A.B., *Extension Recreation Specialist* (1946).
GLADYS WASMUTH,[1] M.S., *Extension Specialist in Home Management* (1941), 1935.
CHARLES VINYARD WILSON,[1] M.S., *Assistant Extension Animal Husbandman* (1946), 1919.
EDWARD WOODWARD,[10] *Extension Editor* (1945).

[1]In cooperation with the United States Department of Agriculture.
[2]Resigned June 15, 1946.
[3]In cooperation with the State Department of Agriculture.
[4]On leave of absence, 1946-47.
[5]Resigned March 22, 1947.
[6]Resigned March 15, 1947.
[7]Resigned March 31, 1947.
[8]Resigned February 14, 1947.
[9]Resigned December 31, 1946.
[10]Resigned June 30, 1947.

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THE WEST VIRGINIA ENGINEERING EXPERIMENT STATION STAFF

WALTER ALLOS KOEHLER, CH.E., M.S., PH.D., *Acting Director* (1946), 1924.
ROLAND PARKER DAVIS, PH.D., *Professor of Structural Engineering* (1911).
GEORGE PAUL BOOMSLITER, M.S. IN C.E., *Research Professor, Mechanics* (1937), 1920.
HAROLD MALCOLM CATHER, M.S.M.E., *Professor of Mechanical Engineering* (1945), 1916.
ALEXANDER HARDIE FORMAN, M.M.E., PH.D., *Professor of Electrical Engineering* (1947), 1913.
HENRY WITHERS SPEIDEN, M.S.C.E., *Professor of Civil Engineering* (1941), 1931.
CHARLES T. HOLLAND, B.S.E.M., M.S.E.M., *Research Engineer, Petroleum, Gas, and Coal Fellowships* (1946).
HOWARD P. SIMONS, PH.D., *Associate Professor of Research, Supervisor International Nickel Company Fellowship on Heat Transfer* (1946), 1939.
JAY EDGAR BILLINGSLEY, B.S.C.E., *Research Engineer, Petroleum and Gas Fellowships* (1945).

BENNETT SEXTON WHITE,[1] B.S.M.E., *Associate Professor of Research on Design of Pulp Debarking Machines* (1945), 1919.

JAMES R. MACDONALD,[2] PH.D., *Assistant Professor of Research, Armstrong Cork Company, Fellowship on Metallurgy* (1944), 1943.

JAMES IRVING REYNOLDS, B.S.M.E., *Assistant Professor of Research (part time), Steam Calorimeter Research* (1944), 1942.

MELVIN EUGENE HINKLE, B.S.M.E., *Research Associate, Bituminous Coal Research, Inc., Fellowship on Coal Mine Drainage* (1944).

CHARLES W. BEELER,[3] A.B., *Research Assistant, Bituminous Coal Research, Inc., Fellowship on Coal Mine Roofs* (1945).

EDWARD P. BARTKUS,[3] B.S., *Research Assistant, Fellowship on Chemicals from Coal* (1944).

KENNETH O. LILLY, *Research Assistant, Coal Preparations Fellowship* (1945).

ROBERT LEO ALKIRE, B.S., *Assistant Research Engineer* (1946).

STEPHEN WISWELL,[4] B.S.CH.E., *Research Assistant (part time)* (1946).

KATHRYN HUFFMAN, M.S. (*Chemistry*), *Chemist (part time)* (1944).

HAYWARD GLEN TAYLOR, B.S.CH.E., *Research Assistant* (1946).

GUY AVEY, B.S.C.E., *Research Assistant, Civil Engineering* (1946).

WALTER WESLEY BAKER, B.S.CH.E., *Research Assistant, International Nickel Company Fellowship on Heat Transfer* (1946).

HOWARD MCINTYRE, B.S.CH.E., *Research Assistant (part time), Fellowship on Coal Mine Roofs* (1946).

[1]Retired as Associate Professor of Research, July 1, 1946.
[2]Resigned September 15, 1946.
[3]Resigned July 1, 1946.
[4]Resigned June 7, 1946.

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THE MINING AND INDUSTRIAL EXTENSION STAFF

CHARLES T. HOLLAND, B.S.E.M., M.S.E.M., *Assistant Director* (1945), 1930.

MARY BANDIERA ALLEGRANI,[1] B.S. (*Chemistry*), *Research Assistant and Analyst* (1945).

LESLIE EMIL BRADLEY, A.B., *Instructor in Mining Extension* (1945).

PAUL NORRIS BROWN, B.S.CH.E., *Research Assistant (part time)* (1945).

A. PAGE DICKENS, *Instructor in Mining Extension* (1937).

ROSCOE E. HANNA, JR., B.S., *Instructor in Industrial Extension* (1944).

THOMAS WILLIAM HOWARD, B.S.E.M., *Research Fellow in Mining and Industrial Extension* (1946).

KENNETH O. LILLY, *Research Assistant* (1945).

WILLIAM HENRY MACKENZIE, *Instructor in Mining Extension* (1945).

JOSEPH DWIGHT MCCLUNG, B.S.E.E., *Instructor in Mining Extension* (1941).

JAMES STANLEY POUNDSTONE, *Instructor in Mining Extension* (1924).

W. B. TALBOTT, *Instructor in Mining Extension* (1927).

HOBART WATSON, *Instructor in Mining Extension* (1925).

JAMES OLIVER WEEKLY, *Instructor in Mining Extension* (1945).

[1]Resigned November 15, 1946.

THE MILITARY STAFF

EDWARD PAGE LUKERT, *Colonel, Infantry* (1945).
GEORGE W. HAWKINS, *Major, Corps of Engineers* (1946).
KERMIT B. BLANEY, B.S.AGR., *Captain, Infantry* (1946).
JOSEPH W. KOHNSTAMM, *Captain, Signal Corps* (1947).
TOM L. MARSHALL, B.S.AGR., *Captain, Air Corps* (1946).
GEORGE NORRIE, JR., *Captain, Infantry* (1946).
JAMES W. EVANS, JR., *First Lieutenant, Air Corps* (1947).
EDWIN J. WHITE, JR., *First Lieutenant, Air Corps* (1946).

JAMES F. KAST, *Master Sergeant, Field Artillery* (1944).
JACK C. MIXON, *Master Sergeant, Corps of Engineers* (1946).
JOHN D. PARSONS, *Master Sergeant, Air Corps* (1946).
EUGENE J. RYSHKUS, *Master Sergeant, Signal Corps* (1946).
TONY J. TERRIZZI, *Master Sergeant, Air Corps* (1947).
ROBERT C. CALDWELL, *Technical Sergeant, Air Corps* (1946).
HENRY C. CARTER, *Technical Sergeant, Air Corps* (1946).
ALFRED H. ORTMANN, *Staff Sergeant, Infantry* (1942).
HORACE W. PARKER, *Technician Third Grade, Ordnance* (1946).

THE ATHLETIC STAFF

ROY M. HAWLEY, A.B., *Director of Intercollegiate Athletics* (1938), 1935.
FORREST B. CRANE, A.B., *Director of Athletic Publicity* (1947), 1942.
GLENNIS ELLIS, B.S., *Assistant Football Coach* (1942).
ALBERT C. GWYNNE, A.B., *Coach in Wrestling* (1934).
IRVIN EDWARD HOWELL, A.B., *Assistant Coach in Football* (1947)
WILLIAM FRANKLIN KERN, A.B., *Coach in Football* (1940).
SAMUEL JOHN MORRIS, M.D., *Eedical Adviser* (1935).
LEE PATTON, *Basketball Coach* (1945).
IRA ERRETT RODGERS, A.B., *Assistant Coach in Football and Head Coach in Baseball* (1943), 1920.
ARTHUR NEWELL SMITH, A.B., *Coach in Track Athletics, Cross-country, and Athletic Trainer* (1931), 1923.
LOWRY MCELVAINE STOOPS, *Assistant Director of Intercollegiate Athletics* (1926).

THE ATHLETIC COUNCIL

G. O. ROMNEY (chairman), C. L. COLSON, H. M. FRIDLEY, and J. O. KNAPP, faculty members; G. W. JACKSON and I. L. VANVOORHIS, Alumni members; R. G. GENTRY, student member; and WM. G. THOMPSON, Board of Governors member, *ex officio.*

THE STANDING COMMITTEES*

The University

COMMITTEE ON STUDENT AFFAIRS (GENERAL): MR. ASPINALL, Director of Student Affairs (chairman), and the chairman of each of the following sub-

*The first-named member serves as chairman.

committees: convocations, discipline, student residences, social affairs, University calendar, student publications, student body, student organizations, and prizes, scholarships, and loans.

CONVOCATIONS AND PUBLIC EXERCISES: MESSRS. ASPINALL, CROCKER, CUTHBERT, and HARRIS; student members, RUTH COX and FRANK A. ANDY.

DISCIPLINE: MESSRS. STRAUSBAUGH and BESLEY; MISS STALNAKER.

FRATERNITY AND SORORITY SCHOLASTIC RECORDS: MESSRS. PEAIRS, LONG, and SEMON; MRS. COLE.

OFF-CAMPUS SCHEDULES: MESSRS. ASPINALL, SHORTRIDGE, and HAYMAN.

PRIZES, SCHOLARSHIPS, AND LOAN FUNDS: MESSRS. ASPINALL, STONE, ARMENTROUT, CUTHBERT, HAYMAN, and HENNING; MISS ARNOLD.

SOCIAL AFFAIRS: MESSRS. DARBY, MORRIS, LUKERT, CORNELL, and WELLS; MISSES ARNOLD, PALMER, and GRIFFIN; student members, MABEL ELIZABETH CLOWER, HARRIET L. WIEDEBUSCH, ERVIN R. BAKER, JR., and JOHN HUGHES CONLEY.

STUDENT BODY: GEORGE M. FUMICH, JR., president; ANN YEAGER, vice-president; RUSSELL K. BOLTON, Senior representative; CONSTANCE BEVINS, Senior representative; ROBERT R. BROWN, Junior representative; ROSALEE STATLER, Junior representative; WILLIAM H. HESS, Senior Class president; LELAND E. BYRD, Junior Class president; PATRICIA STUCKMAN, Sophomore Class president; MORT UNION, Freshman Class president.

STUDENT FEE FUND: MR. ASPINALL and MISS ARNOLD; student members, GEORGE M. FUMICH, JR., WILLIAM I. POWELL, and BETTY ASHBURN GUM.

STUDENT ORGANIZATIONS: MESSRS. DUSTMAN, WHEAT, and FRIDLEY; MISS TURNER and MRS. ALLEN.

STUDENT PUBLICATIONS: MESSRS. REED, SPIKER, HAWLEY, CATHER, WHERRY, PEAIRS, and HARDMAN; student members, MARGARET JACKSON and J. CLARENCE SPITZNOGLE.

SUBCOMMITTEE ON NEW RESIDENCES: MESSRS. ASPINALL, MILLER, and DICKINSON.

STUDENT RESIDENCES: MESSRS. ASPINALL, CORSON, STONE, and SLEETH; MISSES ARNOLD and WADDELL; student members, MARY JO HICKEY and ROBERT E. JOHNSON, JR.

ADMISSIONS: The Registrar and the deans and directors of all colleges and schools admitting freshmen.

BOARD OF GOVERNORS SCHOLARSHIPS: MESSRS. CORNELL, C. H. CATHER, J. L. HALL, LONG, and ROMNEY; MISS ARNOLD.

BUILDINGS AND GROUNDS: MESSRS. MILLER and DYE.

PERMANENT BUILDINGS: MESSRS. LAZZELL, BALDWIN, H. M. CATHER, MARSH, and SUMMERS.

RADIO: MESSRS. BROOKS, JENNY, SUMMERS, SUNLEY, and VEST; MISS SORELLE.

SPACE ALLOCATION: MESSRS. BALDWIN, MILLER, HUBERT HILL, and LONG.

The Senate

COMMITTEES: MESSRS. BRAWNER, CURTIS, FORMAN, LEACH, and ROMNEY.

EXTENSION: MESSRS. ASPINALL, BALDWIN, C. R. BISHOP, FRASURE, HOLLAND, and KNAPP.

INSTRUCTIONAL POLICIES AND PRACTICES: MESSRS. SPIKER, ASHBURN,

COLLETT, DODDS, E. C. JONES, PERCIVAL, and WHEAT.

LIBRARY: MESSRS. BENNETT, ALLEN, BRAWNER, ERICKSON, MACLACHLAN, SEIBERT, SUMMERS, and MISS STALNAKER.

MEMBERSHIP: MESSRS. STRAUSBAUGH, BROOKS, and LAWLESS.

PUBLICATIONS: MESSRS. ABEL, BATTLES, H. M. CATHER, JENNY, KEEN, LONG, and REED.

RESEARCH: MESSRS. LEACH, ANDERSON, CROCKER, LAZZELL, MARTENS, SIMONS, STURM, THOMAS, VAN LIERE; MESSRS. ORTON, KOEHLER, DUSTMAN *ex officio*.

SUMMER SESSION: MESSRS. DADISMAN, EASTON, LONG, SHORTRIDGE, and MISS PALMER.

TEACHER TRAINING: MISS NOER; MESSRS. C. R. BISHOP, COLEBANK, CUTHBERT, GIBSON, MCBRIDE, PARSONS, STEMPLE, and TAYLOR; MISS GRIFFIN.

TENURE AND RETIREMENT: MESSRS. DICKINSON, ARMENTROUT, COLWELL, SLEETH, and VEST.

SPECIAL COMMITTEES OF THE SENATE

LATIN AMERICA: MESSRS. MANNING, ASHBURN, ASPINALL, MITRANI, and VEATCH.

RESOURCES OF THE STATE: MESSRS. HOLLAND, BESLEY, FRIDLEY, POHLMAN, and SUNLEY.

The Colleges

SCHOLARSHIP:

College of Agriculture: MESSRS. POHLMAN and PERCIVAL and MISS DIETRICH.

College of Arts and Sciences: MESSRS. WINTER, FORD, HARRIS, SPIKER, and SMITH.

College of Education: MESSRS. WHEAT and COOK and MISS POLLOCK.

College of Engineering and Mechanic Arts: MESSRS. HALL, KOEHLER, and C. H. CATHER.

School of Journalism: MESSRS. REED and BELL and MISS SORELLE.

School of Medicine: MESSRS. DODDS, CHANDLER, FENTON, MACLACHLAN, and SLEETH.

School of Music: MESSRS. CUTHBERT and WOOD and MISS HINKEL.

College of Pharmacy: MESSRS. GEILER, BERGY, and WOJCIK.

School of Physical Education and Athletics: MISS HURST and MESSRS. SEMON and TORK.

NOTE: For all other college committees see the announcements of the respective college or school in Part III of this **Catalogue.**

Fraternity Advisers

Beta Theta Pi, A. M. REESE; Delta Tau Delta, CARL M. FRASURE; Kappa Alpha, C. R. BISHOP; Kappa Sigma, A. J. DADISMAN; Phi Delta Theta, ROBERT COLWELL; Phi Kappa Psi, DAVID W. JACOBS; Phi Kappa Sigma, CHARLES L. LAZZELL; Phi Kappa Tau, DANA WELLS; Phi Sigma Delta, V. J. LEMKE; Phi Sigma Kappa, SAMUEL J. MORRIS; Pi Kappa Alpha, R. H. WHERRY; Pi Lambda Phi, G. P. BOOMSLITER; Sigma Chi, G. OTT ROMNEY; Sigma Nu, RUSSELL H. GIST; Sigma Phi Epsilon, H. G. WHEAT; Tau Kappa Epsilon, F. F. CARHART, JR.

Sorority Supervision

Supervision of all sororities (see page 83) on the campus is vested in the Office of the Dean of Women.

Part II

General Information*

HISTORY

West Virginia University originated from the National Land-Grant (Morrill) Act of July 2, 1862, and the subsequent action of the Legislature in accepting and carrying out the provisions of the Act. On January 9, 1866, the board of trustees of the Monongalia Academy at Morgantown tendered to the Legislature, for use of the contemplated state or land-grant college, all its property, including Woodburn Female Seminary, on condition that the college should be located at Morgantown. On January 30, 1867, the Legislature accepted the property and on February 7 passed an act permanently establishing "The Agricultural College of West Virginia" and authorizing the Governor to appoint 11 suitable persons as a Board of Visitors.

The Visitors held their first meeting on April 3, 1867, at which time they appointed Dr. Alexander Martin president and established collegiate, scientific, and agricultural departments of instruction. Military training was introduced at this time under the provisions of the Morrill Act.

By an act of December 4, 1868, the name of the College was changed to "West Virginia University" and the "Board of Visitors" to the "Board of Regents." On July 1, 1919, the "Board of Regents" was merged in the "State Board of Education." By an act passed April 14, 1927, the control of the University was vested in a "Board of Governors."

Following the establishment of the University, expansion was rapid. The College of Law was added in 1878; the College of Engineering and Mechanic Arts in 1887; the Agricultural Experiment Station in 1888; the College of Agriculture and the School of Music in 1897; and the School of Medicine in 1902.

With the opening of the new century a period of consistent growth was entered upon. A Department of Pharmacy was added to the School of Medicine in 1914; in the same year the Department of Home Economics, until then a unit in the College of Arts and Sciences, was transferred to the College of Agriculture. The Division of Agricultural Extension was organized in 1912, and Liberal Arts extension centers were established as early as 1916.

In 1917 an extensive building program was inaugurated, which has added eight major units to the Campus. The Engineering Experiment Station was organized in 1921 and the School of Mines in 1926. In 1927 the work in Education, hitherto administered as a department of the College of Arts and Sciences, was transferred to the newly-created College of Education. In 1928 the Division of Physical Education was created.

Paralleling this development, faculties were methodically strengthened, curricular adjustments steadily undertaken, and foundations laid for social, industrial, and scientific research agencies as bases for still broader fields of

*NOTE: West Virginia University reserves the right, without further notice, to revise the organization, fees, offerings, and requirements herein announced.

service. The movement culminated in the order of the Board of Governors of January, 1930, providing for the establishment of a Graduate School looking beyond the degrees of Master of Arts and Master of Science, which the University had steadily conferred for half a century, to the more advanced curricula leading to the degree of Doctor of Philosophy.

In 1936 the Department of Pharmacy was discontinued as a unit in the School of Medicine and was established as a College of Pharmacy. A year later the Division of Physical Education and the Department of Athletics were combined to form the School of Physical Education and Athletics. The Course in Forestry, begun in 1935 as a two-year course in the College of Agriculture, in 1937 was enlarged to a full four-year course enabling this college to grant the degree of Bachelor of Science in Forestry. The unit then became the College of Agriculture, Forestry, and Home Economics. In 1939 the Department of Journalism was discontinued as a unit in the College of Arts and Sciences and was made the School of Journalism. In the same year a Department of Art was established in the College of Arts and Sciences. The Department of Social Work was authorized in 1943 to offer undergraduate work leading to the degree of Bachelor of Science (Social Work) and on the graduate level a one-year Social Work curriculum leading to a Professional Certificate of Social Work. A new four-year course offered by the College of Arts and Sciences and the School of Medicine leading to the degree of Bachelor of Science (Medical Technology) was approved in 1944.

The University has had 12 regular presidents: Alexander Martin, 1867-1875; John W. Scott (acting), 1875-1877; John Rhey Thompson, 1877-1881; Daniel Boardman Purinton (acting), 1881-1882; William L. Wilson, 1882-1883; Robert C. Berkeley (Chairman of the Faculty), 1883-1885; Eli Marsh Turner, 1885-1893; Powell Benton Reynolds (acting), 1893-1895; James L. Goodnight, 1895-1897; Jerome Hall Raymond, 1897-1901; Daniel Boardman Purinton, 1901-1911; Thomas Edward Hodges, 1911-1914; Frank Butler Trotter (acting), 1914-1916; 1916-1928; John Roscoe Turner, 1928-1935; Robert Allen Armstrong (acting), 1935; Chauncey Samuel Boucher, 1935-1938; Charles Elmer Lawall (acting), 1938-1939; 1939-1945; Charles Thompson Neff, Jr., (acting), 1945-1946; Irvin Stewart, 1946-.

LOCATION

West Virginia University is located in Morgantown, the county seat of Monongalia, south of the Mason-Dixon line where it forms the boundary line between southwestern Pennsylvania and northern West Virginia.

Morgantown is 11 hours by rail from New York City, 12 hours from Chicago, and three hours from Pittsburgh. It may be reached from the east and west through Grafton, West Virginia; Connellsville, Pennsylvania; or Greensburg, Pennsylvania. It is served by two railroads, the Baltimore and Ohio and the Monongahela, which is owned jointly by the Baltimore and Ohio, the Pennsylvania, and the Pittsburgh and Lake Erie (New York Central System).

Motorists can reach Morgantown from the National Pike (U. S. Route 40) through Uniontown or Washington, Pennsylvania; Wheeling, West Virginia; or Cumberland, Maryland; and from the Northwestern Turnpike (U. S. Route 50) by way of Oakland, Maryland, or Grafton, West Virginia.

Morgantown is connected with the national network of motorbus lines through the Blue Ridge (Greyhound) and West Virginia Transportation Company (Baltimore and Ohio Railroad) systems.

THE PHYSICAL PLANT

West Virginia University's Campus comprises about 66 acres near the center of Morgantown on high ground overlooking the river and much of the surrounding countryside. The physical plant includes 36 state-owned buildings or structures on the Campus, five demonstration and experimental farms near Morgantown, three experimental farms and two agricultural extension centers located at suitable points throughout the state, a summer surveying camp for Civil and Mining Engineering students, and a summer camp for Forestry students.

The structures on the main Campus, with dates of construction or acquisition, are: Martin Hall (1870), Experiment Station Building (1873), Woodburn Hall (1874), Commencement Hall* (1889), Science Hall (1893), Mechanical Hall (1902), Armory (1902), Old Library (1902), President's House (1905), Heating Plant (1906), Music Building (1914), Horticulture Greenhouse (1915), Medical Building (1916), Oglebay Hall (1918), Oglebay Annex (1933 and 1937), Women's Hall (1919), Plant Pathology Greenhouse (1920), Law Building (1923), Mountaineer Field (1924), Cafeteria (1924), Hall of Chemistry (1925), Men's Field House (1928), Elizabeth Moore Hall (1928), University Library (1931), University Rural High School (1933), two wings to Women's Hall (1935), Men's Dormitory (1935), Beaumont House (1937), Alexander Wade School (1939), Mineral Industries Building (1942), University Health Center (1942), Terrace Hall (1942), Home Management House (1942), Library Commission (formerly Health Service) (1942), Forestry Building (1946), and two Annexes (1946).

The farms, with dates of acquisition, are: Dairy Husbandry Farm, 175 acres (1899) and 29.5 acres (1941); Horticulture Farm, 62.5 acres (1916); Animal Husbandry Farm, 321 acres (1916) and 262.5 acres (1941), including a portion for poultry husbandry; Agronomy Farm, 102 acres (1916); and Poultry Husbandry Farm, 20 acres (1916), all near Morgantown; University Experiment Farm at Kearneysville, Jefferson County, 158 acres (1930); Reymann Memorial Farms at Wardensville, Hardy County, 930 acres (1917) and 57 acres (1943); Lakin Experiment Farm at Lakin, Mason County, 74 acres, leased from the State Board of Control (1921); Reedsville Experiment Farm, Preston County, 457 acres (1944).

The agricultural extension centers, with the dates of establishment, are: the 4-H Club Camp at Jackson's Mill, Lewis County (1921), and the Recreation Center at Oglebay Park, Ohio County (1926).

FUNDS

The funds for maintaining the University, the Agricultural Experiment Station, the Engineering Experiment Station, the Mining and Industrial Extension Division, and the Agricultural Extension Division are derived from the following sources: (1) Interest on the land-grant endowment of $115,300; (2) the Morrill-Nelson fund; (3) the Hatch fund; (4) the Adams fund; (5)

the Smith-Hughes and the Smith-Lever funds; (6) the Purnell fund; (7) the Capper-Ketcham fund; (8) the Bankhead-Jones fund; (9) the Bankhead-Flannagan fund; (10) biennial appropriations by the Legislature; (11) fees and tuition; (12) income derived from the sale of farm and dairy products as well as income from athletics, dormitories, dining halls, bookstore, student activities, etc.; and (13) contributions by private benefactors for the support of scholarships, loan funds, and prizes.

GOVERNMENT AND ORGANIZATION

Direction of the educational, administrative, financial, and business affairs of the University is vested in the Board of Governors. The board is bipartisan and consists of nine members who are appointed by the Governor with staggered terms of service.

West Virginia University is on the approved list of the Association of American Universities and is a member of The North Central Association of Colleges and Secondary Schools.

The University year is divided into two semesters of 18 weeks each and a Summer Session of two terms of approximately six weeks each.

Acting in an advisory capacity to the President and assisting him in carrying out established University policies is a **Council of Administration,** composed of the president, the vice-president, the registrar, and the deans and directors of all colleges and schools, as well as other administrative officers who may be called to take part in the deliberations of the Council.

The **University Senate,** a legislative body with jurisdiction over all academic matters that concern the entire University and all matters that concern more than one college or division, is composed of the president, the vice-president, the registrar, all professors, associate professors, and assistant professors in all colleges, schools, and divisions, and all heads of departments.

The **Graduate Faculty,** composed of all members who teach courses on the graduate level, sets the specific requirements and standards of quality for admission to candidacy for graduate degrees and for the award of graduate degrees. For a list of members of the **Graduate Council,** see page 8.

The **Committee on Student Affairs** acts as an integral part of the whole organization of the University. Its program is bound up with that of the University as a whole, designed to serve the larger academic and social objectives of modern education. For a list of members, see page 30.

The Colleges and Schools

The organization of the University, together with the dates of the establishment of the various colleges, etc., follows:

Colleges: College of Arts and Sciences, 1867; College of Law, 1878; College of Engineering and Mechanic Arts, 1887; College of Agriculture, 1897; College of Education, 1927; College of Pharmacy, 1936.

Schools: School of Music, 1897; the Summer Session, 1898; School of Medicine: Courses in Medicine, 1902; School of Mines, 1926; Gradu-

ate School, 1930; School of Physical Education and Athletics, 1937; School of Journalism, 1939.

Divisions: Division of Military Science and Tactics, 1867; Division of Forestry, 1937; Division of Home Economics, 1937.

Experiment Stations and Research Bureaus: Agricultural Experiment Station, 1888; Engineering Experiment Station, 1921; Bureau for Government Research, 1931; Division of Documents, 1934.

Extension Service: Agricultural Extension, 1912; Mining and Industrial Extension, 1914; Liberal Arts Extension, 1916; Extension in Education, 1916.

The College of Agriculture, Forestry, and Home Economics; the College of Arts and Sciences; the College of Engineering and Mechanic Arts; the College of Pharmacy; the School of Mines; the School of Music; and the School of Physical Education and Athletics are all degree-granting units admitting freshmen. The College of Education, the College of Law, the School of Journalism, and the School of Medicine are professional colleges and schools requiring from two to three years of academic training as a foundation for professional work. All graduate instruction is administered by the Graduate Council and the Graduate Faculty.

A full description of the organization and offerings of the colleges and schools of the University is found in Part III of this Catalogue.

The Summer Session

The forty-ninth Summer Session of the University will be held from June 4 to August 22, 1947. The session will be made up of two terms of six weeks each.

The College of Law will conduct one 8-weeks session. The University Rural High School will be in session the first nine weeks for secondary-school student teaching, practice supervision, and observation. The University Laboratory Elementary School will be in session during the first six weeks for elementary-school observation and practice supervision.

The requirements for admission and the character of the work offered are the same for the Summer Session as for the regular year.

Credit may be obtained towards the Bachelor's and Master's degree in most of the departments. Offerings are varied from summer to summer so that students may complete the work for the Master's degree by attending summer sessions only.

For complete description of courses, see the **Summer Session Bulletin.**

The Division of Military Science and Tactics

(1) Requirements:

a. West Virginia University, a beneficiary of the Act of Congress of 1862, offers, in time of peace, a four-year and eight-weeks course of instruction in military science and tactics. Successful completion of the entire course leads to a commission as Second Lieutenant in the Officers' Reserve Corps, United States Army, honor graduates of West Virginia University successfully completing the entire course are offered commissions as Second Lieutenant in the Regular Army, under conditions prescribed by law.

b. The course comprises two years of elementary (Military Science 1, 2, 3, and 4), two years of advanced training (Military Science 105, 106, 107, and 108), and a Summer Camp of eight weeks' duration during the summer normally fol-

lowing the Junior year. The Summer Camp is conducted at government expense, and eligible students are paid $75 monthly in addition to traveling expenses for the full period of attendance.

c. All male students not specifically exempt by the provisions of the appropriate paragraph below are required by chapter eighteen, article eleven, of the official code of West Viginia, and by orders of the Board of Governors of the University, to complete satisfactorily the entire elementary course as a prerequisite to graduation from the University. This work may be taken as enrolled or nonenrolled members of the Officers' Training Corps. To be enrolled in the R. O. T. C., a student must successfully pass the prescribed qualifying examinations and be physically fit for subsequent voluntary service as a commissioned officer of the Army. Quota limitations for both elementary and advanced military science are set by the War Department and cannot be exceeded without special authority.

(2) The Curriculum:

a. Elementary instruction is given for three hours per week throughout the two semesters of each school year. Two hours' credit is allowed for each semester's work.

b. The third and fourth years of instruction in military science, normally corresponding to the Junior and Senior years of the student, comprise the advanced course and are entirely elective on part of the student and highly selective on part of the Professor of Military Science and Tactics. Application for advanced training should be made not later than the end of the preceding school year to insure favorable consideration. Instruction is given in Infantry, Corps of Engineers, Air Corps, and Signal Corps, on basis of five hours per week. Three hours' credit is allowed for each semester completed.

c. Army veterans with 12 months or more of service are eligible to apply for enrollment in the advanced course immediately upon entrance into the University for the fall semester. No enrollments for this course will initially be made at any other time. Veterans with less than 12 months' service, but more than six, will be eligible to apply for enrollment in the advanced course only upon completion of MS 3 and MS 4. Veterans who have attained their twenty-seventh birthdays are ineligible.

(3) Allowances:

a. Commutation of subsistence, in the amount of the current value of the Army field ration, will be paid monthly to each student taking the advanced course. Proposed legislation now in the hands of Congress will raise this daily allowance by $1. In addition, officer-type uniforms are furnished all military students by the government.

b. Basic students will be furnished a regulation Army uniform only.

(4) Military Deposit:

Each student must deposit with the Comptroller, at time of registration, the sum of $10 to cover any loss or damage to Government property while in his possession. This deposit will be refunded at the expiration of the school term upon undamaged return of the property.

(5) Exemptions:

a. The following students will not be required to enroll in the Division of Military Science and Tactics but may elect to do so with the approval of the Professor of Military Science and Tactics:

(1) Those who are not citizens of the United States and do not intend applying for citizenship.
(2) Those who, at time of entrance, are more than 23 years of age, and former students over that age who re-enter the University after an absence of three years.
(3) Graduate students.
(4) Students whose studies are entirely within the School of Music.
(5) Students who are taking only the short course, the special interim courses, or extension work.
(6) Students who at time of matriculation have successfully completed not less than 58 hours of work, and all who have completed the two-year basic ROTC course at an institution maintaining a senior unit. Those who have satisfactorily completed one, two, or three semesters in a senior unit will be allowed comparable credit.
(7) Students who are unable to perform military duty for physical reasons.

b. Exemptions will be determined by the adviser from student's records and from recommendations of the University physician.

c. Veterans of World War II are exempted from taking basic military training (i.e., Military Science 1, 2, 3, and 4). But note paragraph 2 c in connection with advanced course work.

(6) Organization:

The Division of Military Science and Tactics and the conduct of military training is the responsibility of the Professor of Military Science and Tactics, who, together with his military staff, are officers and noncommissioned officers of the Army appointed by the War Department for duty at West Virginia University.

(7) The University Band:

a. The University band functions under the Military Division, the responsible head being the P. M. S. & T.

who, together with his military staff, are officers and noncommissioned

b. Membership is drawn from all classes, including graduate students, of the various schools and colleges of the University. Assignment thereto is determined by audition. All band members are required to take such military training as the P. M. S. & T. may direct.

c. In the near future, an R. O. T. C. Band will be organized. Until such time as this is accomplished, enrolled and non-enrolled R. O. T. C. students are encouraged to try out for the University Band. Band instruments are furnished.

The Library

The Library's origin coincides with that of the University itself. Monongalia Academy possessed a small collection of books which became the nucleus of a library for the newly formed institution.

The function of the Library is to provide the books and related materials necessary for successful instruction and research. In line with this function, the Library strives to build strong, well-balanced collections in all subject fields included in the curricula of the University. Although primarily designed to supply the study and research needs of the staff and students, the Library

collections are available to anyone, and many of its holdings may be borrowed through interlibrary loan, and to residents of West Virginia through the Library's Extension Service department.

There are approximately 200,000 catalogued volumes in the book collection. About 1,100 periodicals and newspapers are received currently, many of them gifts. There is a special collection of books, manuscripts, and newspapers relating to West Virginia. It is estimated that there are more than 500,000 pieces in the collection of private manuscripts, about 3,000,000 items in the collection of court records, and several thousand volumes of newspapers, periodicals, and books.

Audio-visual materials are recognized as important implements of instruction. The Library has about 450 educational motion-picture films, 250 film strips, a sizeable group of recordings, and a small collection of slides.

Except during vacations and holidays, the Library is open from 7:55 a.m. to 10:00 p.m., Monday through Friday; from 7:55 a.m. to 5:00 p.m. on Saturday; and from 2:00 p.m. to 5:00 p.m. on Sunday. During periods when the University is not in session, the hours are from 9:00 a.m. to 12:00 noon and 1:30 p.m. to 5:00 p.m., Monday throuugh Friday; 9:00 a.m. to 12:00 noon on Saturday; closed all day Sundays and holidays.

University Extension

The work of this division is under the general supervision of the Director of University Extension. The work given in extension courses corresponds in every particular to that given in the same courses on the Campus. Students taking extension courses for credit must satisfy fully all requirements for admission to the University and, before registering, must file with the Registrar of the University complete official transcripts of their entrance credits.

The maximum undergraduate credit that may be counted towards any degree for extension work conducted by the University is 48 semester hours. The maximum undergraduate credit that may be counted towards a degree for extension work taken in other institutions is 30 semester hours. No more than 15 hours of work taken in graduate extension courses may be counted towards any graduate degree, and of these only 8 semester hours may be in one field.

No University extension courses may be offered for credit without the approval of the Director of University Extension. Library and laboratory facilities for each course must be approved by the Director and, in the case of courses for graduate credit, by the Graduate Council. Reference books for the use of extension students may be borrowed from the University Library upon the order of the Director of University Extension, subject to the approval of the Library Committee. Postal charges must be paid by the individual or groups for whom the books are borrowed.

A fee of $8.00 per semester hour is charged for each extension course offered for undergraduate credit. A fee of $10.00 per semester hour is chargd for each extension course offered for graduate credit.

For further information write to the Director of University Extension.

The University Book Store

The University Book Store, located on the ground floor of the Law Building, is maintained for the convenience of the students and staff. It is open during customary business hours and keeps on hand constantly textbooks, stationery, drafting-room instruments and supplies, etc., which are available to the staff and students at a discount price. The Book Store also buys and sells used textbooks.

Musical Organizations

The University and Community Orchestra is open to all students who are proficient in the use of orchestral instruments. Rehearsals are held weekly. Students participating receive 1 hour of credit each semester.

The University Women's Glee Club is open to all University girls who can sing a part. Rehearsals are held weekly. Students participating receive 1 hour of credit each semester.

The University Men's Glee Club is open to all University men who can sing a part. Rehearsals are held weekly. Students participating receive 1 hour of credit each semester.

The University and Community Mixed Chorus is open to all students who can sing a part. Rehearsals are held weekly. Students participating receive 1 hour of credit each semester.

The University Band is open to all University men who can qualify. Concerts are given locally in addition to out-of-town appearances.

University Broadcasting

Broadcasting of radio programs to the people of West Virginia was established at the University in May 1938, when Station WMMN, Fairmont, began a series of noncommercial programs originating on the campus. Since 1940, when Station WAJR was established in Morgantown, University programs have also been broadcast locally. During the school year 1946-47, regular weekly and other Campus programs are broadcast over WMMN as well as over WAJR. All are of an educational, informative, or entertaining nature.

The University is prepared to open its doors to all West Virginia stations that wish to broadcast special Campus events.

LIVING ACCOMMODATIONS

The University maintains three large dormitories, one for men and two for women. For information as to accommodations and rates, address the office of the Business Director of Residence Halls. Cost of room and board will be determined later.

The following rules are in effect:

No student will be permitted to live in other quarters until after the Men's Hall and the Dormitories for Women are fully occupied.

In the assignment of rooms in these buildings all freshmen shall be required to take rooms therein before members of any other classes shall be assigned rooms therein, no freshman being allowed to live outside the dormitories if there is room in them. In enforcing the above rules the following exceptions shall be made:

(1) When the parents or legal guardians of the students reside

in Morgantown or within commuting distance of the University, these rules shall not apply.

(2) When the home of the student is within such distance that it is entirely practicable for him to live in his home and reach the University by car or otherwise for all his classes, these rules shall not apply.

(3) When students above the rank of freshman reside in approved sorority or fraternity houses under the supervision of the Director of Student Affairs and the Dean of Women, these rules shall not apply.

(4) When conditions of employment (such as firemen in various buildings and homes, employment on dairy and experimental farms, etc.) require residence on the premises, these rules shall not apply.

When the space is needed for underclass women, no senior sorority woman will be permitted to live in Women's Hall if there is room for her in her sorority house.

Because of the greatly increased enrollment and the shortage of dormitory space, rooms are assigned only to students whose homes are in West Virginia. Men's Hall is reserved for freshmen. Assignments are for the academic year.

More detailed information may be found in the Dormitory Bulletin, a copy of which will be furnished by the office of the Business Director of Residence Halls.

Board and lodging for woman graduate students is available in private dwellings in Morgantown. Board and lodging for men also is available in private dwellings. For information concerning houses on the approved list men should address the office of H. E. Stone, West Virginia University, Morgantown. Women should communicate with the office of the Dean of Women, Morgantown.

Cafeteria

The University Cafeteria is open for all three meals, except on Sunday. Only the noon meal is served on Sunday.

ADMISSION TO THE UNDERGRADUATE COLLEGES AND SCHOOLS

Methods of Admission

Sudents are admitted to the University either by examination or on certificates from accredited secondary schools.[1] In the latter case the certificates must set forth the work of the student in detail. Diplomas or certificates of a general nature are not sufficient.

Candidates for admission to the University must be at least 16 years of age. They must present certificates of good moral character, and if from other colleges or universities, they must present letters of honorable dismissal.

Candidates for admission who do not present entrance certificates, or who come from other institutions of learning without letters of honorable dismissal may, at the discretion of the Committee on Admissions, be allowed to register provisionally. In every such case the Registrar will make immediate inquiry of the institution from which the applicant comes, and if satisfactory certificates of credit and good standing cannot be obtained, the registration will be cancelled and the fees paid by the applicant will be returned. A provisional registration will not ordinarily be continued for a period longer than one week.

[1]In accrediting West Virginia secondary schools the University follows the classification made by the State Supervisor of High Schools.

Entrance Unit Defined

The requirements for admission to the various colleges of the University are stated in terms of units.

A unit in any subject represents the amount of work that may be done in a standard high school in a year of 36 weeks, with five recitation periods per week, of no less than 40 minutes each. In courses in which laboratory work is required, from two to three periods of laboratory work are considered the equivalent of one period of recitation according to the amount of outside preparation required in connection with such work.

Graduates of accredited schools receive credit for the work certified, with the understanding, however, that no student may enter any college or school of the University until he has credit for 15 units, i. e., the work of the standard four-year high-school course.

Certification of Entrance Unit

Entrance units should be certified on the blank form prescribed by the University, so that credit values may be readily computed. These certificates should be sent to the Registrar at least two weeks before the applicant presents himself for matriculation. Failure to do this will result in delay in registration and may render the student liable for the payment of the $2 late-registration fee. After the certificate has been considered by the Committee on Admissions and the credits recorded, it becomes the property of the University and is permanently filed in the Registrar's office.

Prescribed and Elective Units

A. Fifteen units of high-school work are required for entrance to the University.

B. The following groups are required:
   (1) Four units in English[2]
   (2) Three units in a second subject
   (3) Two units in each of two other subjects.

C. The work in "A" must include the following:

For admission to all colleges and schools, 1 unit in algebra.

For admission to the College of Agriculture, in the case of students who elect agriculture or forestry as their major field of study—1 unit in plane geometry.

For admission to the College of Arts and Sciences, in the case of students who intend to elect chemistry, geology, mathematics, physics, or pre-medical studies as their major field of study— 1 unit in plane geometry.

For admission to the College of Engineering or the School of Mines— 1½ units in algebra, 1 unit in plane geometry, and ½ unit in solid geometry.[3]

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[2]A student may enter the University with 3 units in English and satisfy admission requirements by making at satisfactory grade on the English Placement Test, or by successfully completing English 1C, English Composition.

The the College of Engineering and in the School of Mines, a student may enter with only 3 units in English if he also presents for entrance 2 units in a foreign language.

[3]Students entering the College of Engineering or the School of Mines may be admitted conditionally with only 1 unit of algebra or without solid geometry, but they will be irregular in their schedule. All conditions must be removed during the first year.

For admission to the College of Pharmacy—1 unit in history and 1 unit in science.

D. Work in the following subjects not to exceed the number of units placed after each subject will be accepted:

Subject	Units
English	4
Foreign languages[4]	
Latin	4
Greek	3
French	3
German	3
Spanish	3
Italian	3
Education	2
Mathematics	
Algebra	2
Plane geometry	1
Solid geometry	½
Trigonometry	½
History and Economics[5]	
History	3
Civics	1
Economics	1
Sociology	1
Drawing	
Free-hand drawing	1
Mechanical drawing	1
Music (applied)	2
Journalism	1
Speech	1
Science[6]	
Physics	1
Chemistry	1
Biology[7]	1
Botany[7]	1
Zoology[7]	1
Geology	1
General science	1
Physical geography	1
Physiology	½
Commercial geography	½
Commercial law	½
Vocational subjects (not to exceed 4 units)	
Agriculture	4
Household arts	3
Manual training	3
Bookkeeping or bookkeeping and commercial arithmetic	2
Commercial arithmetic (alone)	½
Shorthand	1
Typing	1
Aeronautics	1
Art	1
Hygiene and sanitation	1
Physical education	1

Special Requirements for Admission

All candidates for the degree of Bachelor of Laws must present a minimum of 90 hours of credit from an institution of approved standing. All work taken after June 1, 1947, must carry an overall average of at least 1.3 honor points, or the equivalent. In computing such overall average, one honor point will be deducted for each hour of F Courses in military science and physical education (service program) will not be counted either in computing hours of credit or honor points. Work taken before June 1, 1947, will be acceptable provided it carries an average grade of C, or one honor point per credit hour, or the equivalent.

Any degree fom an institution of approved standing will be regarded as satisfying the requirements for admision provided, in the opinion of the Scholarship Committee of the College of Law, the degree satisfies the entrance requirements of the Association of American Law Schools.

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[4]1 unit of Latin will be accepted. No less than 2 units of either French, German, Greek, Italian, or Spanish will be accepted unless sufficient additional work in that language is taken in college to complete a minimum of 2 units.

[5]A group of 3 units may be formed by combining 2 units of history with 1 unit of icvics, economics, or sociology, or with ½ unit each of any two of these subjects.

[6]A group of 2 or 3 units in science may be made by combining 1 unit each of any two or three of the following: physics, chemistry, botany, biology, zoology, geology.

[7]If a student presents either botany or zoology for entrance he may have credit for no more than ½ unit of biology; if he presents both botany and zoology, no credit in biology will be allowed.

Every applicant for admission must present to the secretary of the school, before registration, a complete transcript of his record in each institution which he has attended after completion of his secondary education.

No applicant will be admitted who previously shall have attended another law school and who shall be ineligible to return to that school in good standing.

The College of Education:

The requirements for admission to the College of Education shall be the completion of 58 semester hours of approved college work, with an average of at least 1 honor point per credit hour. Candidates for the bachelor's degree in Education register for their first two years of work in the College of Arts and Sciences. Freshmen and sophomores who expect to enter the College of Education will indicate their intention when they register. Their studies will be directed by Professor Elizabeth Stalnaker, adviser for pre-Education students. Such students should so order their courses of study as to satisfy requirements for junior standing and should be fulfilling requirements for the certification of teachers.

The School of Journalism:

A candidate seeking admission to the School of Journalism with the view of obtaining a degree must have satisfied the requirements for matriculation in one of the University undergraduate colleges and must have earned at least 58 semester hours of college credit. A student deficient in physical education and military science will be required to take these subjects as soon as possible. During his freshman and sophomore years he should have completed satisfactorily all or most courses specified for pre-journalism majors. A pre-journalism student not maintaining at least a C average during his first two years in all college subjects is strongly advised not to enroll in the professional school.

The School of Medicine:

In addition to the high-school requirements the applicant for admission to the School of Medicine must have credit for at least three years of work in a college of recognized standing. This must include 90 hours of credit exclusive of military science and physical education.

This 90 hours of credit must include the following subjects and hours: English composition, 6 hours; physics, 8 hours; biological sciences, 12 hours (mainly zoology and comparative anatomy); chemistry, 20 hours (including 6 hours organic); psychology, 3 hours; a modern foreign language, 12 hours (German or French preferred); Latin, 6 hours recommended.

Selection of Students: The number of students the Medical School can accommodate is strictly limited. Applications for admission are considered by the Committee on Admissions of the School of Medicine, which selects those with the highest qualifications of scholarship and personal fitness. An important factor is the score of the applicant in the aptitude test sponsored by the Association of American Medical Colleges and given at suitable times. Applicants are required to take this test unless individually excused by the Committee on Admissions. Students should consult pre-medical advisers about taking this test. Applications for admission may be made as much as a year in advance of the opening date. Only **bona fide** residents of West Virginia may be considered for admission.

Further details concerning entrance requirements to the School of Medicine may be obtained by writing to the Dean of the School of Medicine or to the Registrar of the University. A full statement concerning suggested premedical courses is to be found in Part III of this Catalogue (page 122).

The School of Music:

Students who meet University entrance requirements are admitted to the School of Music either by examination or on certificate from an accredited secondary school. In case of the latter, the certificate must set forth the work of the student in detail. Students may enter the Applied-music courses in the School of Music at any time during the semester without credit. An examination will be given them to determine what work they are prepared to do. It is to their advantage, however, to enter at the beginning of the semester. Students majoring in Music will be expected to have acquired previously a background in the fundamentals of music and a fair ability in music reading. All students will be examined at least twice a year, in January and in May, to determine the progress made.

In the School of Music special provision may be made to permit talented individuals to take work in Applied Music without credit.

Conditional Admission:

Students must make up all deficiencies before they can be classified as sophomores.

Special Students

Persons who do not desire to become candidates for a degree may, by permission of the Committee on Admissions and of the faculty and dean of the college which they desire to enter, be admitted as special students, subject to the following provisions:

1. Special students must as a rule be 21 years of age.

2. Special students must satisfy at least 9 units of the requirements for admission, including 2 units of English.

3. Every application for admission as a special student must be presented in writing to the Committee on Admissions and must set forth fully the applicant's reason, together with a detailed statement of the studies he desires to pursue.

4. Special students are subject in all respects to the usual rules relating to registration and scholarship. They may be assigned to classes for which they apply, it being understood, however, that admission to any class rests entirely with the instructor in charge, and further, that admission to any class when so granted does not necessarily imply credit for prerequisites.

5. In the College of Law, students with less than the academic credit required of candidates for the degree of Bachelor of Laws will be admitted as special students only if:

(a) they have credit for no less than two years of work of collegiate grade in an institution of approved standing;

(b) they are at least twenty-three years of age;

(c) there is good reason, acceptable to the Scholarship Committee, for thinking that their experience and training have specially equipped them to engage successfully in the study of law, despite the lack of the required college credit; and

(d) the number of such special students admitted each year shall not exceed ten percent of the average number of students admitted by the College of Law as beginning regular law students during the two preceding years.

6. In the School of Mines, special provisions are made for those taking strictly vocational courses.

Admission to the Graduate School

Applicants holding Bachelors' degrees from West Virginia University or from other accredited institutions may be admitted to the Graduate School by formal application to the Chairman of the Graduate Council. An official transcript of previous academic record must be sent directly to the Registrar of the University by the registrar of the other institution. Additional undergraduate work may be required by the University departments in which the candidate proposes to specialize.

Applications for admission should be made either in person or by letter approximately one month before the opening of the semester or term for which registration is desired. Blank forms may be obtained from the Chairman of the Graduate Council. The application must be in the hands of the Council at the time the student presents himself for registration for graduate courses. If the student contemplates entering upon candidacy for an advanced degree he should announce in his application his choice of a major field of study. Then he will be referred to the head of the department in which he desires to do his major study, who will assign him to an adviser.

Eligible students who wish to further their education without reference to a higher degree will be admitted to the Graduate School provided they elect graduate courses for which they can satisfy the prerequisites.

Advanced Standing

Application for advanced standing on account of work of college grade done before entrance to the University should be made to the Committee on Admissions not later than two weeks after the applicant's matriculation.

If no certificates are offered or if those offered are considered by the Committee on Admissions to be irregular or insufficient, the Committee will arrange for an examination of the applicant. Upon payment of the examination fee, the Registrar will issue an examination card to the dean of the proper college, who will sign the card and forward it to the department concerned. After the examination the head of the department will report to the office of the Registrar the names, numbers, and credit values of the courses, if any, for which the applicant is entitled to credit.

The College of Law:

Applicants for admission to advanced standing must satisfy the ordinary requirements for admission to the first-year class, must have successfully pursued the study of law in a school which is a member of the Association of American Law Schools, and must have received credit for courses equivalent to those required of students in the College of Law. The extent of credit allowed for work done elsewhere is determined by the Scholarship Committee.

Any applicant for advanced standing may also, in the discretion of the faculty, be required to pass examinations in any or all courses presented for credit.

The School of Music:

Advanced standing in applied music is given only by examination. Persons desiring such standing should enroll at the beginning of the semester, and after they have become thoroughly familiar with the requirements for each semester's work, they may take a special examination in which they will prove their ability to meet the requirements as outlined.

The College of Pharmacy:

No student shall be permitted to complete the course in pharmacy in less than three collegiate years in a college of pharmacy, regardless of the amount of credit offered for advanced standing. This is in accordance with the by-laws of the American Association of Colleges of Pharmacy.

Credit in Correspondence Work:

Credit up to a maximum of 30 semester hours for work completed by correspondence in non-laboratory courses will be accepted by the University when such work is given by accredited colleges or universities that accept this work for credit toward their own degrees and whose residence work is accepted by West Virginia University. In compliance with an order of the State Board of Education, however, credits obtained in correspondence courses will not be considered in certifying students for teachers' certificates.

VETERANS OF WORLD WAR II

The University recognizes that men and women from the Armed Forces who enter college require individual and personalized guidance in order to facilitate their entrance into the University and to aid in their adjustment to University life. A special University Veterans Counseling Committee, composed of representatives from several colleges and schools, is prepared to assist veterans in obtaining expert advice for the planning of a program which is best suited to the needs of the individual. In addition, a Veterans Coordinator is available for consultation and help in the solution of personal problems which may arise in the transition to civilian student life.

Information regarding the educational opportunities made possible at the University through the provisions of the Service Men's Readjustment Act of 1944 (G. I. Bill of Rights) and the Vocational Rehabilitation Program of the Veterans Administration (Public Law 16) may be obtained from the Veterans Coordinator, J. C. Gluck, by personal conference or by mail.

Veterans of World War II may be admitted to the University by the Committee on Admissions by any of the following methods:

1. Graduation from an accredited preparatory school.
2. Presentation of 15 units of high-school work without graduation.
3. Advanced standing from other accredited colleges or universities.

4. Evidence of sufficient maturity and ability to do college work furnished by the use of United States Armed Forces Institute tests and norms for high school; American Council on Education tests; or by tests and norms developed locally in any college, school, or department. Training of any kind received in the service will be considered and, if possible, evaluated for entrance or college credit.

5. Veterans who present at least 9 units of entrance credit may be admitted as special students.

6. In some instances, with the approval of the college, school, or division concerned, special short courses may be arranged for veterans who do not meet any of the above-mentioned requirements.

An honorably discharged veteran of World War II who has successfully completed basic training in the Armed Forces of the United States shall be excused from any additional work in Basic Military and in the Physical Education Service Program.

REGISTRATION

Persons who are not registered as students in the University and who are not members of its administrative or teaching staffs shall not be admitted to regular attendance in University classes.

Time and Place of Registration:

All students are expected to register on the days set apart for registration at the beginning of each semester or term of the University. Students in the College of Agriculture, Forestry, and Home Economics, the College of Arts and Sciences, the College of Education, the College of Pharmacy, the Graduate School, the School of Journalism, the School of Music, and the School of Physical Education and Athletics register in the Field House on Beechurst Avenue. Students in the College of Engineering register in Mechanical Hall; students in the School of Mines register in the Mineral Industries building; students in the College of Law register in the College of Law building; and students in the School of Medicine register in the School of Medicine building.

Registration for the first semester, 1947-48, will take place on Saturday, Monday, Tuesday, and Wednesday, September 13, 15, 16, and 17, 1947.

Immediately after completion of their registration, all students are expected to pay their fees at the office of the University Comptroller in the Administration Building.

During registration week all male freshmen will report at the Field House for assignment of lockers, for appointment for physical and medical examinations, and for physical achievement tests.

Freshmen women will report during registration week at Elizabeth Moore Hall for similar examinations and tests.

All freshmen are required to take such intelligence and placement tests as are made part of the Freshman Week program.

College Credit Defined:

A college credit or semester-hour represents the amount of work done in one semester in one recitation hour with two preparation hours a week. From two to three hours of laboratory work are considered equivalent to one hour of recitation, according to the amount of outside work assigned in connection with the laboratory hours.

Numbering of Courses:

Courses offered in the various colleges and schools of the University are numbered so as to indicate the rank (freshman, sophomore, junior, senior, or graduate) of the students for whom they are intended. See page 88.

Adviser:

The college in which a student is enrolled shall have jurisdiction over the course of study of that student. Each student upon entering the University is assigned to an adviser, whose duty it is to assist the student in his registration, to keep a record of his work, and to report his registration and standing to the Registrar as required. The adviser approves the student's program of studies, sees that all prescribed work is taken in proper sequence, approves the selection of elective courses, and assists the student generally in planning his course of study so that he may proceed systematically and without conflicts. Changes in registration must always have the approval of the adviser. The student will look to his adviser for guidance in all matters pertaining to his work.

Maximum and Minimum Work:

The maximum and minimum number of hours per semester as well as the maximum number of hours per year for which a student may register during the regular academic year of the University are as follows:

	Minimum Hours per Semester	Maximum Hours per Semester	Year
Agriculture	14	20	..
Arts and Sciences	14	18	34
Education	..	18	35
Engineering and Mechanic Arts	14	20	..
Forestry	14	20	..
Home Economics	14	18	34
Journalism	14	18	36
Law	13	16	..
Medicine	17	20	..
Mines	14	20	..
Music	14	20	..
Pharmacy	14	20	..
Physical Education and Athletics	14	20	..

The work of the Summer Session is equivalent in character to that of the regular year. Six semester hours' credit is a normal load for either term. A student who has earned 2.0 honor points (Arts and Sciences standard) for each hour of registration during the last semester or summer term in residence at the University may petition the respective Scholarship Committee, or the Graduate Council if a graduate student, to take no more than eight hours. This rule may not be used to reduce the graduate residence requirement.

A student desiring to do irregular work, more or less than the prescribed number of hours in any college, must obtain permission from the Committee on Scholarship in his college. This permission is not valid until it has been reported to the Registrar for record.

Late Registration:

No student will be permitted to register in the University after the eighteenth day of a semester or the ninth day of either term of the Summer

Session, without the special permission of the dean of the college or director of the school which he proposes to enter. No student registering late will be permitted to enroll for more hours of work than the number of weeks in actual attendance without the permission of the Committee on Scholarship of the college or school concerned.

Substitution for Required Courses:

A student who desires to substitute another course for any course prescribed in his curriculum or required for the degree toward which he is working, must obtain permission for such substitution from the Committee on Scholarship in his college or school, but there can be no substitution from group to group.

Visitors:

Students who are registered in the University may be permitted to attend classes as visitors, provided they shall have obtained the written permission of their advisers and of the instructors in the classes they desire to visit. Members of the administrative or teaching staffs, or other regular employees of the University, may be permitted to attend classes as visitors, provided they shall have obtained the written permission of the heads of their departments and of the instructors in the classes which they desire to visit.

No record is kept of the work and attendance of persons admitted to classes as visitors and no credit is given for their work in such classes.

Persons eligible to attend classes in the University as visitors may obtain the proper permission blanks from the Registrar.

Withdrawal from the University:

A student who desires to withdraw from the University must obtain a withdrawal card from the office of the Registrar. Withdrawal procedure will be explained to him when he obtains this card.

Students who withdraw from the University without permission will receive at the end of the semester a grade of "FIW" (failure because of irregular withdrawal) in each of the subjects for which they are registered and will be indefinitely suspended from the University.

Students who desire to drop part of their work may withdraw from classes in which they are enrolled with a grade of W at any time prior to the end of the second week following the date set for mid-semester reports. Withdrawal permits must be approved by the adviser and filed with the Registrar. If such withdrawal reduces the student's hours below the required minimum, the permit must be approved by the Scholarship Committee. Withdrawals after the above date will be permitted only in exceptional cases and must be approved by the Scholarship Committee of the college in which the student is registered.

Re-entry after Withdrawal:

Students required to withdraw from one college of the University because of failure in their work and permitted to transfer to another college of the University may not again register in the college in which they were originally registered without the consent of the Scholarship Committee of that college.

Return of Books to the Library:

Students must present a signed statement from the Librarian that they have returned all books and paid all the library fines incurred, before they withdraw. No student will be allowed to graduate before paying all fines and returning all Library books.

UNIVERSITY FEES AND EXPENSES

(Subject to change without notice)

Fees

All fees are due and payable at the Comptroller's office on the day of registration.[1] Students registering pay the following fees:

Semester Fees in the Colleges and Schools

COLLEGE OR SCHOOL	REGULAR YEAR				SUMMER SESSION				REMARKS
	Full Time[2]		Part Time[4]		Full Time[2]		Part Time[4]		
	Resident[3]	Non-resident[3]	Resident[3]	Non-resident[3]	Resident[3]	Non-resident[3]	Resident[3]	Non-resident[3]	
Agri. For., H. Ec.	$ 40.00*	$115.00*	$ 3.00 per credit hour	$ 8.00 per credit hour	$ 25 or $ 30†	$ 35 or $ 40†	$ 5.00 per credit hour	$ 7.00 per credit hour	*Includes Contingent fee ($30); Student Activity fee ($7);‡ Health Service fee ($2.50);‡and Hospital fee (50c.)‡ †Either term, lower figure; both terms higher figure.
Arts and Sciences		Fees in this column include out-of state tuition.							
Education									
Engineering									
Journalism									
Mines									
Physical Education and Athletics									
Music	$ 75.00*	$150.00*							*See above
Pharmacy (See "Special Fees in Pharmacy")	$ 65.00*	$140.00*	$ 4.00 per credit hour	$ 12.50 per credit hour					*See above
Law	$ 65.00*	$190.00*	$ 4.00 per credit hour	$ 12.50 per credit hour	$ 40.00	$ 50.00	$ 8.00 per credit hour	$ 10.00 per credit hour	*See above
Medical Technician (Jr. & Sr. Years)	$ 65.00*	$140.00*			No instruction during the summer				*See above
Medicine	$127.00*	$202 00*	$ 8.00 per credit hour	$ 12.50 per credit hour					

[1]Students who have not paid their fees before the close of office hours of the second Saturday following the opening of a semester or a summer term, shall be dropped from the rolls of the University, and the Registrar shall notify their instructors that their class cards are to be withdrawn.

[2]A full-time student is one who is registered for 10 or more semester-hours of work during each semester of the regular academic year, or 4 or more semester-hours of work during each term of the summer session. A full-time student during the regular academic year receives a student activity book which entitles him to admission to all out-door athletic events and, by the payment of an additional nominal amount at each event, entitles him to admission to all in-door athletic events held in the Field House. A full-time student during the regular academic year, or during the summer session is entitled to free medical consultation and advice from the University physician. A moderate charge is made for room-calls, X-rays, special laboratory tests, drugs furnished by the University Pharmacy, minor operations, treatment of fractures and dislocations, and intravenous treatment.

[3]No person shall be considered eligible to register in the University as a resident student who has not been domiciled in the State of West Virginia for at least twelve consecutive months next preceding his registration. No non-resident

Special Fees

Late-registration fee (nonrefundable)[5]	$ 2.00
Graduation fee[6]	10.00
Professional Engineering degree (including $10 graduation fee)	25.00
Student's record fee[7]	1.00
Junior certificate	1.00
Special extra fee for flight training:	
A.E. 101	100.00
A.E. 102	100.00
G. 121	100.00
G. 123	180.00
Special extra fee for Social Work:	
Social Work 311, Field Work	12.50
Social Work 312, Field Work	12.50
Change in registration fee (after 8th day)	1.00
Fee for examination for entrance credit, per unit	1.00
Fee for examination for advanced standing	3.00
Fee for General Educational Development tests (high-school level)	15.00
Social work certificate	2.00
Fee for reinstatement of students dropped from the rolls	3.00
Fee* for examination of candidates for graduate degrees	1.00
Student locker fee (men)	2.50
Student locker fee (women)	2.00
Vocational non-credit, per month	25.00

Special Fees in Medicine and Pharmacy

Students in colleges and schools other than the College of Pharmacy and the School of Medicine who register for courses in the College of Pharmacy or the School of Medicine shall be required to pay a fee of $4.00 per credit hour for such courses in addition to the fees charged in the colleges or schools in which they are registered.

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student may establish domicil in this State, entitling him to reductions or exemptions of tuition, merely by his attendance at the University. A minor student whose parents have become domiciled in West Virginia after the student's original registration in the University, will be deemed to have the domicil of his parents and be entitled to pay resident fees thereafter. Moreover, any student who has originally paid non-resident fees may become entitled to pay resident fees, if after an interim of non-attendance or otherwise he has established a valid legal domicil in this State at least twelve months prior to his re-registration in the University. In any event, the appointment of a guardian for a minor student temporarily resident in West Virginia, other than the designation of a natural guardian, shall not in and of itself operate to establish a West Virginia domicil for such student.

[4]A part-time student is one who is registered for fewer than 10 semester-hours per semester during the regular academic year; or for fewer than 4 semester-hours per term during the summer session.

[5]Charged when students register after registration date announced in the Catalogue, page 5.

[6]The graduation fee is payable by all students at the beginning of the semester or term in which they expect to receive their degrees or diplomas.

[7]One transcript of a student's record is furnished by the Registrar without charge. This fee is charged for furnishing an additional transcript.

*For graduate students not otherwise enrolled at time of final examination.

‡Nonrefundable.

Regularly enrolled students in the College of Pharmacy are given the rivilege of enrolling without additional fees in required Pharmacy courses ffered in the School of Medicine.

Regularly enrolled pre-medical students in the College of Arts and ciences are given the privilege of registering for the following courses in the ollege of Pharmacy without additional charge: Pharmacy 2, Pharmacy 3, harmacy 9, Pharmacy 106, and Pharmacy 107.

School of Music Fees

. **Students Registered for Degrees in the School of Music:**

In addition to the fees required of all full-time students (see table on page 52), resident and non-resident students registered for degrees in the School of Music pay the following fees each semester: Voice, piano, violin, pipe organ, theory and composition, and public-school music, $35.

. **Special Students Registered in the School of Music:**

(a) Theory Courses—Special students registered in the School of Music for theory courses in music shall pay $5 per credit hour for these courses.

(b) Applied Courses—Special students registered in the School of Music for courses in applied music shall pay tuition fees in each semester as follows: for courses in voice, piano, violin, pipe organ, or band and orchestra instruments—one lesson per week, $35, two lessons, $55. For instrument classes the fee is $5 per semester. In ensemble courses the fee in accompanying is $5 per semester; in chamber music, $5 per semester.

(c) Special Work in another College or School—Special students registered in the School of Music who take special work in another college or school of the University shall pay music fees plus the regular rate per credit-hour for the work they are taking in another college or school.

. **Students Registered in Other Schools and Colleges:**

(a) Theory Courses—Students registered in other schools and colleges of the University may enroll for theory courses in the School of Music without paying additional fees.

(b) Applied Music—Students in other schools and colleges of the University who enroll for one or more courses in applied music shall pay the regular fees required in the school or college in which they are registered plus music fees as follows: for courses in voice, piano, violin, pipe organ, or band and orchestra instruments, one lesson per week, $20; two lessons, $35.

. **Piano, Pipe Organ, and Orchestral Instruments for Practice:**

(a) Piano for Practice—one hour a day, $6 per semester; two hours, $10; three hours, $14; four hours, $18.

(b) Pipe-organ Practice—one hour a day, $10 per semester.

(c) Orchestral Instruments—rental fee, $2.50 per semester.

Deposits

The deposits required are as follows: breakage deposit in chemistry, $5 to $10; breakage deposit for students enrolled in medical technology course and in the School of Medicine, $10; for students enrolled in other colleges and schools of the University electing courses in medical technology or medicine, $5 for one laboratory course and $10 for more than one course; military-science deposit, $10; breakage deposit in pharmacy, $10.

Extension of Collegiate Grade

A fee of $8.00 per semester hour is charged for each extension course offered for undergraduate credit. A fee of $10.00 per semester hour is charged for each extension course offered for graduate credit.

Refunding of Fees

A student who withdrew regularly[8] from the University may arrange for a refund of fees by submitting to the Comptroller approval by the Registrar of the refund. Semester fees will be returned in accordance with the following schedule:

	Amount of Refund
During the first and second weeks[9]	All contingent and tuition fees less $2.50
During the third and fourth weeks	80% of contingent and tuition fees
During the fifth and sixth weeks	60% of contingent and tuition fees
During the seventh and eighth weeks	40% of contingent and tuition fees
Beginning with the ninth week	No refunds allowed

Cost of an Academic Year's Work

A student's textbooks will cost from $20 to $40 a year, and his registration fees $80 to $254 if he is a resident; or $230 to $404 if a non-resident. Students in engineering will use drawing instruments costing from $15 to $25. The laboratory breakage deposit required ranges from $5 to $10, a part of which is usually returned at the end of the year. In military science a $10 deposit is required to cover military equipment in the custody of the student, practically all of which is returned to the student when he accounts for his equipment. Board and room may be obtained at from $324 to $400 a year. A student's washing will cost from $18 to $24 a year. Traveling expenses, clothing, and other miscellaneous items will depend largely upon the tastes and habits of the individual student. In general, however, it may be said that the legitimate cost of a nine months' term of residence at the University ranges from $500 to $800 a year.

REQUIREMENTS FOR DEGREES

Candidates for degrees are eligible for graduation upon the completion of the requirements, in the college or school in which they are registered, which were in effect at the time of their first registration in that college or school, provided they apply for graduation within a period of seven years from the time of their first registration. Students who fail to complete the requirements for graduation within seven years from their first registration in the college or school in which they are candidates for degrees, shall satisfy the requirements in effect at the time they apply for graduation.

All University degrees are conferred by the Board of Governors upon recommendation of the faculties of the various schools and colleges. Degrees

[8]To withdraw regularly a student must apply to the Registrar por permission. The withdrawal permit must be approved by the student's adviser and the Dean of the College and filed in the Registrar's office.

[9]Student Activity fee, Health Service fee, and Hospital fee are nonrefundable.

are granted at the close of the semester or summer session in which the students complete their work.

Candidates for degrees to be conferred at the close of the second semester must be present in person to receive their degrees unless excused by the deans of their colleges or directors of their schools.

Scholastic Standing and Honor Points

Marking System:

A—excellent (given only to students of superior ability and attainment)

B—good (given to those students who are well above the average but who are not in the highest group)

C—fair (average students)

D—poor but passing[1]

E—condition

F—failure

I—incomplete

FIW—failure because of irregular withdrawal

W—all withdrawals prior to the end of the second week following the date set for mid-semester reports.

WP—withdrew passing subsequent to the end of the second week following the date set for mid-semester reports.

WF—withdrew failing subsequent to the end of the second week following the date set for mid-semester reports.

Honor Points:

The quality of a student's work is indicated by honor points.

A tabulation, showing the number of honor points, if any, and the grades for which they are given in the various divisions of the University, follows:

Grade	A	B+	B	C+	C	D	F
All colleges, schools, and divisions except the College of Law[2]	3	—	2	—	1	—	—
College of Law	5	4	3	2	1	—	—

Baccalaureate Degrees

Credits and Honor Points Required:

Less than 6 hours in an ancient or modern language will not be counted toward any University degree, diploma, or certificate unless work in the same language has been offered for entrance.

Six hours of English composition and rhetoric (English 1 and 2) are required of all candidates for the bachelor's degree in all colleges and schools of the University.

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[1]Students are permitted to re-register in any course for which a grade of D has been received. In such cases the second grade shall supersede the first, provided it is not lower than D. Veterans of World War II may re-register for courses in which they have a grade of C or higher, but no credit will be given for the new listing.

[2]In the College of Law the sign + after the grades A, B, or C will be used to indicate the differences in standing between students receiving the same letter grade. In the Graduate School, no credits are acceptable toward an advanced degree with a rank lower than C.

Eight hours of military science and tactics are required of all freshmen and sophomore men not specifically exempt.[3]

Two hours of physical education for men, to be taken during the first year in residence, and four hours of physical education for women, to be taken during the first and second years in residence, are required for graduation, except in the case of students entering with advanced standing amounting to 58 semester hours or more.

Each baccalaureate degree is conditioned upon the completion of a specified number of semester hours of credit. For a tabular statement of the number of credit hours required for each degree, see the last column on page 58 under the caption "Classification of Students."

All divisions of the University require minimum standards of scholastic quality. These are expressed in terms of **honor points.** Honor points are computed only on grades earned at West Virginia University (including Potomac State School of West Virginia University), and all courses taken in this institution which are offered towards credit requirements for the degree for which the student is a candidate shall be included in the computation of honor points. The student must maintain an average of one honor point per credit hour in order to be eligible for graduation, except in the College of Law, which requires an average grade of C. The College of Education, in addition to a general average of 1 honor point per credit hour in all subjects, requires an average of 1 honor point per credit hour in Education and in each teaching field.[2]

In order to be eligible for recommendation for any West Virginia high-school teaching certificate, every student in West Virginia University who desires any such certificate must have a general honor-point average of 1.0 and also an honor-point average of 1.0 in each teaching field and in Education.

In all units except the College of Engineering and Mechanics Arts, the Graduate School, the School of Journalism, the College of Law, and the School of Medicine, students may decrease the total number of credit hours required for graduation by doing work of superior quality. For each 8 honor points in excess of 1 honor point per credit hour, the number of credit hours required for graduation may be diminished by one. This does not, however, excuse students from courses required for the degree.

It is the student's responsibility to keep informed on his honor-point standing. This information may be obtained at any time from the dean or director of the college, school, or division in which the student is registered.

Requirements as to Residence:

Students who come to the University from other colleges or universities are advised to make the transfer not later than the beginning of their third year and in no case will a student who matriculates in the University later than October 1 in any year be permitted to receive a degree at the next Commencement.

In special cases students who desire to leave the University at the close of their third year to enter another institution with the purpose of taking a

[2]All applicants for certification are required to present an honor-point average of 1.2 in the first and second teaching fields and in Education.

[3]See page 38.

combined course leading to two degrees or of preparing for graduate study may, upon application beforehand to the Committee on Scholarship of the college or school in which they are registered, be permitted to do the work of the fourth year, or a part thereof, at such other institution and to receive the bachelor's degree from the University upon the presentation of the proper credits.

Except in the College of Law, no student will be granted a bachelor's degree by the University who has not done either a total of 90 hours or the last 30 hours of his work in actual residence at the University.

No student may receive the degree of Bachelor of Laws without at least three semesters in residence at the College of Law and the successful completion of courses aggregating at least one-half of the total number of hours required for graduation.

Classification of Students:

The following table shows the number of semester-hours required for classification as second-year, third-year, and fourth-year students and for graduation, according to the curricula in the several colleges, schools, and divisions. First-year students must satisfy the requirements for admission as set forth on pages 42 to 46 inclusive.

COLLEGE AND DEGREE	Hours Required to Classify As Second-Year Student	Third-Year Student	Fourth-Year Student	Hours Required for Degree
ARTS AND SCIENCES				
Bachelor of Arts (A.B.)				
Regular	25	58	92	128
Pre-Medical	32	58	96	128
Combined (Medicine)[1]	32	58	96	132
Combined (Law)[2]	25	58	96	124
Bachelor of Science (B.S.)				
Business Administration	32	58	99	132
Chemistry	34	58	103	136
Combined (Medicine)[3]	32	58	96	132
Social Work	25	58	92	128
AGRICULTURE, FORESTRY, AND HOME ECONOMICS				
B. S. (Bachelor of Science)	26	64	100	144
B. S. in Agriculture (B. S. Agr.)	26	64	100	144
B. S. in Forestry (B. S. F.)	30	70	110	150
B. S. in Home Economics (B. S. H. E.)	25	58	92	128
EDUCATION[4]				
B. S. in Education (B. S. Ed.)	..	58	92	128
ENGINEERING[5]				
Bachelor of Science (B. S.)	27	60	94	133
B. S. in Aero. Eng'g (B. S. A. E.)	30	72	112	152
B. S. in Chem. Eng'g (B. S. Ch. E.)	30	72	112	152
B. S. in Civil Eng'g (B. S. C. E.)	30	72	112	152

[1]Fourth year in School of Medicine.
[2]Fourth year in College of Law.
[3]Third and fourth years in School of Medicine.
[4]For the degree of Bachelor of Science in Education, at least 10 hours of the residence work must be in Education.
[5]Students matriculating with 58 or more hours of credit may graduate with 148 hours, since physical education is not required of these students.

COLLEGE AND DEGREE	Hours Required to Classify as			
	Second-Year Student	Third-Year Student	Fourth-Year Student	Hours Required for Degree
B. S. in Elec. Eng'g (B. S. E. E.)	30	72	112	152
B. S. in Mech. Eng'g (B. S. M. E.)	30	72	112	152
JOURNALISM				
B. S. in Journalism (B. S. J.)	..	60	92	128
LAW				
Bachelor of Laws (LL. B.)	21	50	...	81
MEDICINE				
Bachelor of Science (B. S.)				
Medical Technician	25	58	107	141
MINES[5]				
B. S. in Eng'g of Mines				
(B. S. E. M.)	30	72	112	152
MUSIC				
Bachelor of Music (B. Mus.)	30	64	102	136
PHARMACY				
B. S. in Pharmacy (B. S. Phar.)				
Retail Pharmacy	30	70	108	142
Industrial Pharmacy	30	70	108	144
PHYSICAL EDUCATION AND ATHLETICS				
Bachelor of Science in Physical				
Education (B. S. P. E.)	28	58	92	128

Work Done Out of Residence:

It is the policy of the University to discourage the taking of regular residence courses in absentia. In the case of courses begun at the University and not completed because of illness or for other acceptable reasons however, permission to complete the work in absentia under the direction of the regular University instructors giving the courses may be granted by the Committee on Scholarship; but in such case credit should be given only upon a report of a grade of no less than "C" on final examination.

This regulation does not apply to University extension courses.

Graduate Degrees

Graduate degrees offered by the departments in the University which have been approved for graduate work are as follows:

Master of Arts (A. M.)
Master of Music (Mus. M.)
Master of Science (M. S.)
Master of Science in Chemical Engineering (M. S. Ch. E.)
Master of Science in Electrical Engineering (M. S. E. E.)
Master of Science in Civil Engineering (M. S. C. E.)
Master of Science in Mechanical Engineering (M. S. M. E.)
Master of Science in Medical Biochemistry (M. S. Med. Biochem.)
Master of Science in Engineering of Mines (M. S. E. M.)
Master of Science in Home Economics Education (M. S. H. E. E.)
Master of Science in Biochemistry (M. S.).
Doctor of Philosophy (Ph. D.)

Professional Degrees

The following professional degrees are conferred upon graduates of the College of Engineering and Mechanic Arts of West Virginia University on the basis of practical experience and study in absentia, the presentation of a thesis, and an oral final examination.

Engineer of Mines (E. M.) Chemical Engineer (Ch. E.)
Mechanical Engineer (M. E.) Civil Engineer (C. E.)
Electrical Engineer (E. E.)

The professional Certificate of Social Work is awarded to those who meet the following requirements:

1. A minimum (including field work) of 30 semester hours of graduate social-work credit.
2. A minimum of two semesters of supervised field work in selected social agencies (450 clock hours).
3. A grade of C or better in all graduate work.

EXAMINATIONS AND REPORTS

Courses

As a rule all courses extend through one semester only.[1]

Examinations

Mid-semester and Final Examinations:

In practically all courses offered in the University, the student receives both a preliminary or mid-semester grade and a final grade. The mid-semester standing of a student is based on the daily recitation grades and a special test given during one or more regular recitation periods. Mid-semester grades are not entered on the Registrar's records. The final grade is based on the class standing for the entire semester and on a written final examination[2] to which a special period of two or three hours is devoted, except that the manner of determining the final grade of seniors and graduate students provisionally approved for graduation at the end of the semester or term is left with the head of the department. Any student not satisfied with his grade, however, has the right to take the examination with his class if he so desires.

Examination Periods:

Mid-semester examinations are held usually during the week of each semester immediately preceding the day of the mid-semester reports as set forth in the University Calendar. Final examinations are held during the last week of each semester of the academic year, and during the last two days of each term of the Summer Session.

Absence from Examination:

Students are required to take all regular examinations. If a student attends a course throughout the semester and is absent from examination with-

[1]In the College of Law all courses extend either through the entire year or through one semester. No credit will be given for less than an entire course except by special order of the Committee on Scholarship. Grades given at the end of the first semester in courses extending throughout the year are merely indicative of the quality of work done by the student to that point and do not give credit for the part of the course so far pursued. Such first-semester grades may be considered in determining the final grade.

[2]See 12 percent rule under "Absences" on page 62.

out permission, the instructor shall count the examination as zero and report the final grade as "F". If, in the opinion of the instructor, the absence of the student was for satisfactory reason, the facct will be recorded on the stuudent's class ticket, the grade "I" will be returned, and the student may, upon application to the instructor, take the examination at a later date.

Conditions and Failures:

If the final grade of a student in any course is "F" it is recorded as a "failure," and the student must take the course again if he desires to receive credit for it. If the final grade is "I" it is recorded as "incomplete." If a grade of "I" is not removed within the following semester by the satisfactory completion of the work of the course it becomes a failure unless special permission to postpone the completion of the work is obtained from the Committee on Scholarship of the college in which the student is registered. A student receiving a grade of "E" may be given a second examination in the subject in which such grade is received, provided he applies for it at the time of his registration. A grade of "E" not removed within the following semester becomes a failure unless special permission to postpone the examination is obtained from the Committee on Scholarship of the college in which the student is registered. If the final grade after a second examination is again "E" it is recorded as a "failure." No grade higher than "C" shall be reported for the removal of a condition. In the College of Law a student who has received a grade of "D" in any course is privileged, but not required, to take the next regular examination in that course in order to raise his grade to one which carries with it honor points.

Reports

Mid-semester grades are reported to students' advisers and to deans but are not recorded in the office of the Registrar.

Final grades are reported by instructors to students' advisers and by them directly to the Registrar's office. Final grades must be in the hands of the class adviser (semester) or the Registrar (summer term)[1] within 48 hours after the closing hour of the examination. This rule also applies to the final grades of all students registered in other colleges or schools of the University who are enrolled in law courses.

The final standing of all seniors provisionally approved for graduation shall be reported by their instructors to the deans or directors of their colleges or schools, and the final standing of all graduate students provisionally approved for graduation shall be reported to the Chairman of the Graduate Council not later than the last day of recitation of the second semester. For this purpose special report cards are supplied by the Registrar.

A report of each student's work is made at the close of the semester or Summer Session either to the student himself or to his parent or guardian.

DISCIPLINE

The rules and regulations which students are required to observe are few, simple, and reasonable: civil and orderly conduct; punctuality and regularity

[1]Final grades are reported by instructors to the Registrar at the end of each term of a Summer Session.

in attendance upon all required exercises; reasonable diligence in the performance of the work prescribed; and abstinence from vices.

All matters of discipline are in charge of the Director of Student Affairs and the Committee on Discipline. No student may be expelled without the approval of the President of the University.

Absences

Each instructor shall be responsible for the attendance of students in his classes, and shall report an excessive number of absences to the dean or director of the college in which the student is registered for such action as may be deemed advisable.

Students who must be absent from class for an extended period of time shall obtain permission for such absence from the dean of the college in which they are enrolled.

All women students who wish to be absent from Morgantown while the University is in session must obtain permission in advance from the office of the Dean of Women.

If a student's absences in any course exceed 12 percent of the total number of recitations in the course he is barred from taking the final examination unless special permission to take such examination is given him by the dean or director of the college concerned and by the instructor.

Delinquent Students

The dean or director of each college shall make suitable and effective provisions for handling delinquent students registered in his college, subject to the general regulations.

Probation and Suspension:

Any student who at the end of any semester fails to make a passing grade in courses amounting to at least half of the total number of semester hours for which he is registered at the end of the second week following the date set for midsemester reports shall, unless restored to probationary standing, be suspended from the University except that a freshman subject to the operation of this rule at the end of one semester in residence shall be placed on probation for the succeeding semester. If a student suspended under this rule is registered in the School of Medicine, his suspension becomes indefinite.

A student who without permission withdraws from the University or from any class for which he is registered (FIW) shall, unless restored to probationary standing, be suspended from the University.

If a student suspended by operation of one of the above rules re-enters the University and again becomes subject to it, his suspension becomes indefinite.

Any student who fails to make a passing grade in courses amounting to at least half of the total number of semester hours for which he is registered, at the end of the second week following the date set for midsemester reports, shall be placed on probation for the remainder of the semester.

The dean or director of each college shall make periodic reports of the problems arising from delinquent students to the Council of Administration.

All actions of the Committee on Scholarship and of the dean or director of the college that affect the standing of a student shall be reported by the dean to the Registrar.

Duties of Instructors:

Instructors shall report the names of delinquent students to their respective advisers at the beginning of each school month except the month in which a midsemester examination occurs and at such other times as the occasion may arise.

In the event that a student who has not been previously reported for delinquency fails in a subject, the instructor must report to the student's dean or director the reason for the failure.

No report should be made by an instructor until after a conference with the student. If the delinquency is a minor or temporary one, the instructor may await the result of his conference before reporting. Delinquency reports should include all failures to make a passing average and unsatisfactory work on the part of those who are capable of doing a higher grade of work.

All reports shall be made on special blanks and a copy of the report should be given to the student.

Duties of Advisers:

All advisers, upon the receipt of the delinquent reports, shall have conferences with the students concerned and shall endeavor to make such recommendations and adjustments as may be within their power.

If the delinquency is due to continued wilful neglect or to failure in one-half of the work for which the student is registered, the adviser shall report the case to the dean of his college, who may, at his discretion, place the student under the jurisdiction of the Committee on Scholarship, and thereafter the adviser shall carry out the orders and instructions imposed by the dean or the committee.

Duties of the Committee on Scholarship:

The Committee on Scholarship shall have authority to proceed according to its best judgment in regard to delinquent students referred to it for its consideration.

All orders of the committee shall become effective when approved by the dean of the college.

In the exercise of its authority the Committee shall not suspend a student during a semester except for wilful neglect and in cases where the student's class grades are so low that further class attendance would be a waste of time. No suspension shall become effective until approved by the dean of the college.

Student Marriages

If any student under the age of 21 years, who has not been previously married, intends to marry within the school year, he or she must obtain the consent of the parents[1] or guardian before such marriage shall be solemnized, in accordance with the provisions of section 8, chapter 48, revised Official Code of West Virginia, 1931.

In order to insure obedience to both the letter and the spirit of this statute and the policy of the University such student must, not less than one week before said marriage, show satisfactory evidence to the office of the

[1]Or of the parent living, or, if the parents be living separate and apart, of the one to whom was accorded the custody of such person.

Director of Student Affairs that the consent of the parents or guardian as required by the statute has been obtained.

In the event that such student does not make such showing to the office of the Director of Student Affairs, regardless of where the marriage ceremony is performed, he or she shall, from the date of such marriage, be automatically suspended, and may only be reinstated upon showing satisfactory reason to the Council of Administration why he or she failed to comply with this regulation.

Where both parties to the marriage are students and one has not complied with the above rule, both shall be suspended as provided above.

STUDENT WELFARE

Director of Student Affairs

The activities of student welfare are under the administration of the Director of Student Affairs. The Director's office is on the second floor of the Administration Building.

Dean of Women

All interests of the women students in the University are in charge of a special executive officer of the University, the Dean of Women. The Dean's office is on the main floor of Elizabeth Moore Hall.

Convocation

Convocations are held at such times as the Committee on Convocations and Public Exercises finds appropriate and desirable. Attractive programs are provided consisting of devotional exercises, addresses by distinguished speakers, and musical and other entertainment features of special merit.

Social Center for Women

On the upper campus, opposite Reynolds Hall, is Elizabeth Moore Hall for women, completed in 1928. The building provides for social, recreational, and physical education activities for women students and was named as a memorial to Mrs. Elizabeth I. Moore. The building is so arranged that facilities for social gatherings constitute a separate unit.

Student Center

The University Armory has been remodeled for use as a temporary student center offering dancing and other recreational facilities. The building is open as a student center from 6:30 to 10:30 p.m. through the week, and from 2:00 to 6:00 p.m. on Sundays. The use of the student center for special group dances and programs on Friday and Saturday nights may be arranged through the Social Committee.

Student Activities

To be eligible to represent the University in public appearances, to hold a staff position on a student publication, to be a candidate for or to hold an office filled by an election conducted by A. W. S. or by the Student Council, or to be a regular member of the University band, a student must have earned at

least 12 semester hours of credit and 12 honor points (Arts and Sciences standard) during his or her last previous semester in residence. This regulation was temporarily suspended during the war.

Associated Women Students:

All women students of the University are members of the Associated Women Students. The purpose of this association is to regulate all matters pertaining to the student life of its members; to further in every way a spirit of friendliness and unity among the women of the University; to increase their sense of responsibility; and to be a medium for maintaining high scholastic and social standards.

The responsibility for directing the work of the Association rests with the Executive Council, which is composed of the following members: a president, two vice-presidents, a secretary, a treasurer, and a representative from each class. These officers are elected annually by the Association.

In 1921 the Association was admitted to active membership in the intercollegiate Association of Student Government for Women Students.

Religious Foundations and Societies

Foundations:

As at most state university centers, various state and national church boards have established foundations at West Virginia University for the religious education and nurture of students. Individual faculty men act as advisers. The churches of Morgantown extend a warm welcome to students of all faiths. The physical plant and equipment of each church is available for social, educational, and recreational activities of students.

Newman Hall, 481 University avenue, is the social and religious center established by the West Virginia Diocese of the Roman Catholic Church for students of that and other faiths. Rev. Joseph Wanstreet is the resident chaplain. Newman Hall is a beautiful building of English collegiate architecture immediately adjacent to the Campus. It is equipped with dormitory facilities for 20 students and also includes a chapel, dining room, lounge, game room, and library.

Trinity Church, Spruce Street, is the center for student work sponsored by the Diocese of West Virginia of the Protestant Episcopal Church and the Church Society for College Work. This work is under the direction of the rector, Rev. Harold M. Wilson, and the director of student work, C. H. McCarty.

The program includes corporate student worship services, meetings of the Canterbury Club, which is one of the National Association of Canterbury Clubs, for discussion and fellowship, and a college chapter of the Brotherhood of St. Andrew, which conducts a mission project in the territory surrounding Morgantown and sponsors a young men's Bible class at Trinity Church. The Brotherhood of St. Andrew is a world-wide organization of young men in the Anglican Communion who have dedicated themselves to the spread of Christ's Kingdom.

The Presbyterian Student Service Project represents the cooperative efforts of the National Boards of Christian Education and Home Missions of the Presbyterian Church, U. S. A., and of the Synod of West Virginia of the Presbyterian Church, U. S., to make the Christian religion a vital factor in

the experiences of students and in the relationships which these students sustain while in the University; and also, through guided Christian activities in the mine-camp communities surrounding Morgantown, to train among educated men and women future Christian statesmen. The Rev. Wm. C. Swartz, 304 Willey Street, is the student pastor and director; Dr. Wm. E. Brooks, 316 Allison Street, is the minister of the church.

Wesley Foundation, 503 High Street, is a center for Methodist students. There are three attractive rooms, a kitchenette, and an office. The students are organized into a working cabinet and carry forward a religious educational program consisting of worship, study, fellowship, community service, mining-camp missions, and other extension activities. The program is under the direction of Dr. W. S. Boyd, pastor of Wesley Church, with Robert R. Sanks assigned by the West Virginia Conference of the church as associate director in charge of student activities.

The Baptist student Christian work headquarters are at the First Baptist Church under the direction of Rev. Val H. Wilson as State Director of Baptist student work and student pastor. Dr. O. O. Dietz is pastor of the church. The program includes participation in Bible School, worship services of the church, B. Y. F., and service in mission churches in nearby districts. Student activities are democratically organized and depend in large measure on student initiative and leadership.

The Hillel Foundation Extension Unit, Jewish Center, 240 High Street, of West Virginia University represents the combined efforts of the West Virginia B'nai B'rith Lodges and of the West Virginia State Federation of Temple Sisterhoods to bring the University's students together in religious, cultural, and social activities. The Foundation is under the direction of Rabbi Justin Hofmann, spiritual leader of the Tree of Life Congregation in Morgantown. Prominent lecturers and speakers are featured at regular intervals by the Foundation for the members of the group and for the general student body.

Other churches, while not having special buildings or workers for University students, make definite contributions in ministering to the religious and social needs of University students who belong to their particular faiths. It should be stated in this connection that college students are welcome in all of our churches regardless of what their church affiliations may be, or indeed whether they have any.

Societies:

Young Women's Christian Association is a voluntary group of women in the University organized for the purpose of promoting and directing widely varied activities for a religious motive. Through its national and international organization, the Y. W. C. A. joins in fellowship with students throughout the world. Membership in the Campus organization is open to all women students in the University who are in agreement with its purpose. The Y. W. C. A. headquarters are located on the second floor of Elizabeth Moore Hall, and Mrs. Eleanor Wirth directs the activities of the organization.

Church organizations. The following organizations have been established by Morgantown churches for the purpose of providing wholesome social activities for the students: Kappa Phi and Delta Sigma Theta—Methodist; Westminster Girls' Club—Presbyterian; Theta Epsilon—Baptist.

Student Social Life

The social life of the students in the University is under the general supervision of the Committee on Social Affairs. This Committee has supervision of every social function given by the University or by an organization within it, including fraternities, sororities, and other student societies. Such social functions as dances, picnics, excursions, and receptions are supervised by this Committee.

The University Young Men's Christian Association of West Virginia University is a nonsectarian fellowship of students and faculty united in the desire to encourage all-around personal and social development in the light of religious principles. Student officers, a student cabinet, a board of directors, and a full-time general secretary direct its activities. The various committees, commissions, and interest groups provide not only their immediate ends but also abundant opportunity for fellowship and leadership training. The YMCA office is located on the second floor of the Administration Building with William H. Henderson the General Secretary. The Association is affiliated with the world-wide YMCA movement and with the Student Christian Movements.

PHYSICAL EDUCATION AND ATHLETICS

Service Programs for Men and Women

Two hours of physical education for men, to be taken during the first year in residence; and four hours of physical education for women, to be taken during the first and second year in residence, are required for graduation of students presenting fewer than 58 hours, unless previous credit has been allowed.

Each student who is required to register for physical education is given a complete medical and physical examination at the beginning of the University school year to determine his fitness for active participation in University activities of any description. See Part III for more extended information on the course offerings of these departments.

Intramural Sports

Intramural Sports for Men:

The department of intramural sports for men is organized as one of the departments of the School of Physical Education and Athletics. It is the aim of this department to encourage the entire student body of the University to participate in organized athletic sports and wholesome, active recreation. Competition will be promoted between student groups, faculty groups, and individuals. The units which are now the natural groups on campus, such as class, fraternity, and unorganized or non-fraternity groups, will form the basis for activities in competitive sports and recreation. It is the desire of the department to foster a spirit of fair play and good sportsmanship in all competition.

All students regularly enrolled in any department in the University shall be eligible to enjoy the intramural privileges, except that they must satisfy certain eligibility requirements for the various activities. All students who are members of the Varsity or freshman squads in a sport, or who have

earned a Varsity award (WV) in a sport, shall be ineligible for intramural competition in that particular sport. All students who have won a Varsity award in a sport from another institution of college rank shall be ineligible for intramural competition in that particular sport. Winning a Varsity award in one sport such as basketball will not bar a student from participation in another intramural sport such as baseball. See **Bulletin of the Department of Intramural Sports.**

All competitions conducted by the department are under the control of the Administrative Board composed of the Dean of the School of Physical Education and Athletics, Director of Intramural Sports, Director of the Service Program for Men, Director of Intercollegiate Athletics, Supervisor of Activities, and the senior managers. The coaches of the various Varsity sports are ex officio members of the Administrative Board and vote on questions of eligibility or protests which concern the particular sport they may coach.

The following activities are conducted during the fall season: speedball, touch football, badminton, volleyball, and handball. Other activities may be promoted during this season when there is sufficient interest on the part of the students and where facilities are available. Leagues will be organized to accommodate classes, fraternities, and non-fraternity or unorganized groups.

The following activities are conducted during the winter season: basketball, indoor track, ping-pong, relays, bowling, and basketball free-throwing.

The following activities are conducted during the spring season: softball, horseshoes, and outdoor track.

Intramural Sports for Women:

The Women's Recreation Association, together with the department of service program for women of the School of Physical Education and Athletics, sponsors the intramural athletic activities for women. It is the aim of these two groups to encourage all women students to participate in organized sports as a recreational activity. Competition takes place between the organized groups on the Campus such as sorority, dormitory, church, independent, and class groups.

All women enrolled in the University are eligible to play in any intramural tournament. The number of physical education majors permitted to play on any one team is restricted. Interclass tournaments in volleyball, basketball, and baseball are held each year for the professional students in physical education.

The following activities are conduuncted during the fall season: field hockey, soccer, horseshoes, tennis, and volleyball; during the winter season: badminton, foul-throwing, swimming, basketball, bowling, tumbling, and table tennis; during the spring season: softball and archery. As the demand for more activities develops, the facilities will be increased and the program broadened.

Intercollegiate Athletics

The activities of the Department of Intercollegiate Athletics are administered by the Director of Intercollegiate Athletics and by the Athletic Council. The council is composed of eight members: four faculty, two alumni, one student, and one member of the Board of Governors (ex officio). The Dean of the

School of Physical Education and Athletics serves as a member, and the Director of Athletics is the executive officer. Instruction and training are given each year in the seasonal sports such as football and cross-country; basketball, boxing, and wrestling; baseball, track, tennis, and golf. Matters concerning athletic eligibility are decided by the Athletic Council, and scholastic eligibility regulations are established by the Faculty of the University.

THE UNIVERSITY HEALTH SERVICE

The University Health Service, which is a part of the organization of the School of Medicine, is maintained to provide medical service to the students of the University and to supervise general health conditions on the Campus. The staff includes four physicians, two nurses, and a laboratory technician, together with the required clerical personnel. The University Pharmacy, where students may obtain medicine, is managed by the College of Pharmacy. The departments of pathology and bacteriology cooperate in the laboratory examination of diagnostic materials.

The Health Service occupies a well-designed University Health Center constructed in 1941. This three-story building is centrally located on the Campus, fronting on College Avenue adjacent to Reynolds Hall. It is built of brick and concrete and is fireproof throughout. On the first floor are the treatment and operating rooms, offices, and pharmacy. The second floor is occupied by the pathology and X-ray departments, together with the department of pathology. Physicians are in attendance during the regular session from 9:00 a.m. to 12:00 noon daily except Sunday, and 2:00 p.m. to 5:00 p.m. daily except Saturday afternoon and Sunday. Medical aid may be obtained at any time by calling Extension 123 on the University exchange. The University Pharmacy is open from 9:00 a. m. to 12:00 noon and 2:00 to 5:00 p. m.

Each regularly enrolled University student pays a fee which provides for medical consultation and advice from the University physicians. Moderate additional charges are made for room calls, X-rays, laboratory tests, minor operations, treatment of fractures, intravenous treatment, and drugs furnished by the pharmacy.

When a student enters the University for the first time, he receives a complete physical examination which includes a blood test, urine analysis, and tuberculin test. The Health Service also gives special physical examinations to students in competitive athletics, to University food handlers, to employees of buildings and grounds, and to other groups as occasion may arise.

Student Hospital Service

Each full-time student of West Virginia University shall have added to his regular semester fees a hospital fee of fifty cents ($0.50) per semester, for which he shall be furnished hospital care as hereinafter provided in either the Heiskell Memorial Hospital, Morgantown, West Virginia, or the Monongalia General Hospital, Morgantown, as ordered by a physician of the Health Service of West Virginia University, subject to the approval of the Director of the Student Health Service. Students in the Summer Sessions shall not be covered by this contract.

In the event of acute illness or accidental injury which necessitates hospitalization, each student shall be entitled to receive hospital service in either hospital mentioned above. Hospital service shall include room accommodation, meals, general nursing care, hypodermics, use of operating room, three X-ray examinations to one illness, ailment, or injury, as ordered by the attending physician during hospitalization, routine laboratory service as ordered by the attending physician during hospitalization, routine medicines and dressings as supplied by the hospital, plaster casts, and all routine hospital service.

Hospital service to be supplied shall not include the following:

Vaccines, serums, X-ray therapy, artificial eyes, orthopedic appliances, crutches, diagnostic dental X-ray, or basal metabolism.

Hospital care shall not be furnished in the following cases:

Injuries resulting from brawls, strikes, riots, or insurrection; wilfully self-inflicted injuries; acute venereal diseases; insanity; drug addiction; alcoholism; and pulmonary tuberculosis.

Hospital care herein provided for shall be furnished only to students who pay full fees and not to part-time students.

Students registering for the first semester of the academic year shall receive benefits from the date of registration to twelve o'clock midnight of the last day of registration for the second semester. Students registering for the second semester of the academic year shall receive benefits from the date of registration to twelve o'clock midnight of the day on which Commencement Exercises are held, or the closing day of the semester if this day is not prior to Commencement Day. In case of accidental injury or emergency illness while traveling outside the area served by the Hospital Service, and where the student of necessity shall have to be cared for in a hospital having no connection with the Hospital Service, then the Hospital Service shall allow $5.00 a day for a period not to exceed 10 days for all services received in such hospital. Students shall be eligible for hospital benefits described as above only so long as they are members in good standing of West Virginia University: i.e., should a student be dropped from the University register for any reason, his contract shall be cancelled automatically and his hospital fee forfeited.

Each student shall be entitled to an aggregate of thirty days of hospitalization during each school year, provided, however, that in case of continuing illness, if hospitalization should be begun during a given semester or term but not completed by the end of such semester or term, the student shall be entitled, in the aggregate, to the same period of hospitalization to which he would have been entitled if he had completed it during such semester or term.

Should a student remain in a hospital after having been discharged as a hospital patient by the attending physician, such student shall be responsible to the hospital for the payment of its regular charges for hospitalization after the date of such discharge, and the Hospital Service shall not be liable therefor. This however shall not prevent the student from again entering a hospital for the remainder of the thirty days as herein provided.

Should a student receive hospital service by reason of accidental injuries suffered through the fault or negligence of another party, and the expenses of

such injuries be collected by suit or settlement, then said student shall reimburse the Hospital Service; or should part of the expenses of such hospital services be collected by suit or settlement on account of such injuries, then said student shall reimburse the Hospital Service to the extent that such expenses may be so collected.

EMPLOYMENT AND PLACEMENT SERVICE

Student Employment:

Students desiring part-time work may register with H. E. Stone, Secretary of Loans and Placement, either before arrival in Morgantown or after enrollment.

Until the successful completion of at least one semester's regular University curricular work, freshmen should not attempt outside work in self-support unless absolutely necessary. Only the exceptional student can engage in such work or activities during the first semester without danger to his scholastic status.

The Senior and Graduate Placement Service:

The University Placement Service for non-teaching positions is in charge of H. E. Stone, Secretary of Loans and Placement. Alumni, seniors, drop-outs, and other students desiring pre-placement guidance or placement assistance may avail themselves of these services.

This bureau in Room 207, Administration Building, registers candidates for positions, interviews registrants, analyzes the changing markets for graduates, studies the policies and practices of employers in dealing with the college product, arranges interviews between employers and candidates, aids students with regard to the techniques of the employment interview, assists graduates seeking promotion or change of position, cooperates with veterans and with individuals and agencies interested in assisting them, and engages in continuous research in the interest of improving these services.

Contacts with employers have resulted in increased visits to the campus by employment representatives of corporations and in saving time for these representatives on the occasion of their visits.

The Placement Service works aggressively to supplement, stimulate, and extend placement activities in the University. The U. S. Civil Service, employment agencies, leading corporations, and the departments, divisions, and colleges of the University cooperate freely with the central placement service. Standard placement application forms are supplied on request.

Pre-placement and Placement Guidance:

Educational and occupational guidance in the earlier college years shade off into direct placement guidance and assistance during the senior year and into follow-up or occupational adjustment service after graduation. A placement guidance service is therefore maintained, including an occupational information bureau with a large and expanding collection of books, booklets, leaflets, and other material on careers open to university-trained men and women. An extensive file of company booklets and magazines, federal bulletins, and Civil Service announcements is also available for consultation by registrants.

The Teacher-Placement Bureau:

The College of Education, in cooperation with other units of the University, maintains a Teacher-Placement Bureau which makes available to school officials the credentials of students and alumni who are candidates for school positions. The facilities of the Bureau are available to students in both the regular and Summer Sessions. No charge is made for this service.

Blanks for registration will be furnished upon application. The regular annual enrollment in the Bureau takes place the second week in February.

While a conscientious effort is made to place all worthy applicants, no one is assured a position. General letters of recommendation are not given to candidates. Information in the files of the Bureau is regarded as confidential. The Bureau cannot undertake to furnish copies of its records to commercial or other private placement bureaus.

The Pharmacists' Register:

A pharmacists' register for the benefit of both the employer and employee has been established by the College of Pharmacy. No charge is made for services rendered.

GIFTS, SCHOLARSHIPS, AND LOAN FUNDS

Several individuals, as well as national patriotic, educational, fraternal, and religious organizations, have established scholarships, loan funds, prizes, trophies, and medals for students in the University.

Gifts

Carnegie Corporation Music Collection—Thanks to the generosity of the Trustees of the Carnegie Corporation of New York, West Virginia University in 1936 received as a gift, designed to stimulate and develop an interest in music culturally on the part of the entire student body, a Music Collection that cost the corporation $2,500. The set includes:

An electric phonograph of special design for use in small rooms and auditoriums; approximately 900 records, chosen as an anthology of recorded music, ancient and modern, from oriental and occidental countries; an oak cabinet with approximately 75 buckram albums in which to keep the records; a duplicate set of printed 3"x5" card indexes of all records in the set, classified by composers, titles, mediums, forms, etc.; bound copies of full scores, when published in miniature, also bound vocal scores of operas and oratorios, which are included for all completely recorded works in the set; lastly, a selection of about 100 books on musical subjects, historical and biographical, and works of reference.

This Music Collection is attractively housed in Elizabeth Moore Hall and its use is administered under regulations designed to make it of greatest possible value to the students of the University.

Scholarships

American Bankers Association Foundation for Education in Economics Loan Scholarships—The American Bankers Association Foundation for Education in Economics has assigned to West Virginia University three scholarships of $250 each. These scholarships will be "awarded only to deserving

students of integrity, intelligence, character, competency, and aptitude, whose means of support are dependent wholly or in part on their own labor, to enable them to continue the study of courses in banking and economics in classes of junior grade or above. Scholarship of the highest rank will not be a definite requirement for a loan scholarship award; however, the Foundation desires to encourage students who will become leaders in professional or business life and does not wish loan scholarships granted to mediocre or inferior students." The holders of these scholarships are eligible for one reappointment. The loan is without interest until the first day of the second January after the recipient leaves the University. Beginning on that date interest accrues at the rate of five (5%) percent per year, and repayment of both principal and interest in sums of no less than $10 monthly must likewise then begin.

Walter Haines South Memorial Scholarship—To perpetuate the name of her deceased brother, a graduate of the University, Mrs. Frederick J. Knutti of Morgantown has created The Walter Haines South Memorial Scholarship. This scholarship, open to deserving men, involves a total of $500 per annum. This fund has been placed in the hands of the West Virginia University Student Loan Fund Corporation for administration. Under the plan of operation of this fund, some one person will be selected who will receive the entire amount of this scholarship fund, without interest, while he is an undergraduate. The amount lent will be repaid over a period of four years after graduation.

The Board of Governors Scholarships—On April 5, 1945, the Board of Governors of West Virginia University authorized the establishment of 25 scholarships to be awarded annually to high-school graduates. The first awards were made for the academic year 1946-47. The scholarships entitle recipients to remission of all fees, except those payable to state special funds and those chargeable to Special Services. Awards are made on the basis of (1) scholastic attainment, (2) citizenship, loyalty, and personality, (3) character and leadership, and (4) extra-curricular abilities. Applications for these scholarships are made through the Board of Governors' Scholarship Committee and scholarships are awarded on recommendation of the committee and on approval by the Board of Governors. Scholarships remain in effect for four academic years unless revoked for disciplinary reasons, for failure to maintain scholastic standard, or because of withdrawal from the University.

The Board of Governors Scholarships in Music—One of these scholarships is to be awarded in the department of voice, one in the department of violin, and one in the department of piano. There will be both preliminary and final contests in voice, in violin, and in piano. Those eligible to take part in the contests will be West Virginia high-school seniors who give promise of becoming eligible for regular enrollment in the School of Music of West Virginia University as candidates for a degree in applied music. Each scholarship to be awarded is to consist of exemption from payment of the contingent fee ($30 each semester) for the four academic years, beginning in the autumn immediately following graduation from high school and the winning of the scholarship.

The holder of a scholarship must maintain each semester a record of achievement deemed by the Scholarship Committee of the School of Music to

be worthy of continuance of the award. Preliminary and final contests will be held in Morgantown, on the campus of West Virginia University, and the dates will be announced.

Charles Irwin Travelli Scholarship—This scholarship amounts to $250 a year and permits the holding student to devote his entire time to his University course.

Victor E. Albright Scholarship—This scholarship is worth $200 per year and is to be awarded "to a boy or girl of good character, of fair health and of the White race, who was born and reared in Preston county and who graduated from a high school of Preston county in the year in which the scholarship is given."

Scholarship in Public Speaking—To the winner of first place in each of the four events (debate, oration, extempore speaking and poetry reading) in the West Virginia Interscholastic Public Speaking Contest will be awarded a four-year scholarship in the College of Arts and Sciences of the University.

The Elizabeth Davis Richards Scholarship in English and Poetry—In memory of Elizabeth Davis Richards, well-known West Virginia authoress and patron of the English Club, an annual scholarship in the amount of $50.00 was established by Mr. Del Roy Richards of Morgantown in December, 1936, to be awarded to some worthy upper-division or graduate student in the department of English.

The John Barton Payne Scholarship—The Hon. John Barton Payne, native of Taylor county and late president of the American Red Cross, bequeathed to the University the sum of $12,000, the income from which is to be used to aid two young men—one a native of Taylor county, the other a native of Preston county—to attend the University. Financial need and scholastic merit are prime considerations in making the award.

The Sears Roebuck Agricultural Foundation Scholarships—A grant to the College of Agriculture of $2,000 from the Sears Roebuck Agricultural Foundation of Chicago makes possible the awarding of scholarships each year to upwards of 16 needy, deserving farm boys enrolling as freshmen in agriculture. Individual scholarships amount to $125 per year.

The selection of the recipients of each of the scholarships is made by the dean and faculty of the College of Agriculture.

The Richard Aspinall Scholarship—This scholarship was established in 1944 by the Morgantown, West Virginia, Moose Lodge. It pays for the tuition, books, room, and board for four years in any undergraduate college on this Campus that the high-ranking student of Mooseheart, Illinois, may elect.

The Southern States Cooperative Scholarship—Each year the most outstanding high-school student in vocational agriculture who is also a member of the West Virginia chapter, Future Farmers of America, and who matriculates in the College of Agriculture will receive a scholarship award of $100 from the Southern States Cooperative, Inc.

The Junior League Scholarship—This scholarship, providing $150 a year for a graduate social-work student, was established in 1942. It is jointly supported by the five leagues of the state. Applicants must be residents of West Virginia, and all applications must be addressed to the head of the department of social work.

The Board of Governors Latin-American Scholarships—These two scholarships are available to Latin-American students for full-time graduate work in the Department of Social Work. They are equivalent to annual non-resident tuition fees; and recipients are selected by the head of the department.

West Virginia Federation of Women's Clubs Pan-American Scholarship—The winner of this scholarship is remitted tuition fees.

The West Virginia Federation of Women's Clubs Scholarship—This scholarship provides $300 a year and is awarded to a full-time student in the Department of Social Work. The recipient, selected by the head of the department, must be a resident of West Virginia.

The Morgantown Service League Scholarship—This scholarship provides $150 a year for a full-time student in the Department of Social Work. The student must be a resident of the state and approved by the head of the department.

The State Department of Public Assistance Scholarships—These social work scholarships, ranging from small sums up to a maximum of $110 a month for six months, are available to selected employees of the department who hold an undergraduate degree from an accredited college or university. Application for these scholarships must be made to the chief of the Division of Social Services or to the chief of the Division of Child Welfare of the State Department of Public Assistance, Charleston. Such students must also be approved by the head of the Department of Social Work.

The pharmacists of West Virginia, individually and collectively, have provided a number of scholarships in the amount of $150 per year for capable high-school graduates needing financial assistance to assist in their pharmaceutical education. The final selections of these scholarships are made by a committee of the West Virginia State Pharmaceutical Association. Additional information may be obtained from the dean of the College of Pharmacy.

The American Foundation for Pharmaceutical Education—This foundation, in order to stimulate an interest for pharmacy as a profession among capable high-school graduates, has assigned several scholarships to the College of Pharmacy. Each scholarship or grant covers tuition fees for one year. Selections for the awards are made by the faculty of the College and are awarded on the basis of scholarship and financial need. The holder may be eligible for reappointment. Additional information may be obtained from the dean of the College.

The School of Journalism Scholarships—Six scholarships in journalism of $100 each are awarded annually to pre-journalism freshmen and sophomores and to professional juniors and seniors on the basis of ability, scholastic achievement, and promise for a successful journalistic career. Scholarship holders are eligible for reappointment. These scholarships were established in 1945. Two of them are known as the Daily Mail Scholarships and were established by Walter E. Clark and Fred M. Stanton of the Charleston Daily Mail. Two are known as the Lewis Baker Scholarships and were established by Mrs. Guy Despard Goff of New York City in memory of Lewis Baker, her father, who was a newspaper executive in Wheeling. The other two are known as the Ogden Scholarships and were established by the News Publishing Company of Wheeling in honor of the late H. C. Ogden, publisher and

alumnus. These scholarships are awarded upon the recommendation of the School of Journalism.

The R. M. Davis Scholarship in Political Science—Mr. R. M. Davis, Morgantown, West Virginia, coal operator, has given to the University the sum of $5,000 to establish a scholarship in the Department of Political Science. The scholarship with an average annual value of between $300 and $500 will be granted to an undergraduate or graduate student registered in the Department of Political Science whose specialty is international relations. The staff of the department will select the winner. Scholastic standing and qualities of leadership will be given primary consideration in awarding the scholarship. Any West Virginia University student whose major is in political science and who is interested in being considered for this scholarship should write directly to the head of the Department of Political Science.

The Kroger Company Scholarship—The Kroger Company will give three scholarships of $200 each, to be divided between agriculture (one) and home economics (two). Awards on the basis of scholarship and leadership in school, church, F. F. A., F. H. A., 4-H, and other youth activities will be made by the Scholarship Committee of the College of Agriculture, Forestry, and Home Economics.

Loan Funds

The following loan funds are administered through the office of the Secretary of Loans and Placement with the cooperation of advisory committees, University officials, and alumni. Applications may be filed with Mr. Stone, 207 Administration Building.

The J. D. Finley Fund—A fund of $1,000 was contributed to the University by the trustees of the estate of the Hon. J. D. Finley of Pittsburgh, Pa., in accordance with his last will and testament, to be used as loans to deserving students in the School of Medicine.

The Theodore Smith Fund—On April 13, 1930, Theodore Smith was drowned in the Monongahela River. His tragic death disclosed the fact that he was being financed through the University by the late Hon. James Elwood Jones. He had taken out a life insurance policy of $2,000 with Mr. Jones as beneficiary. In deference to the memory of Theodore Smith, Mr. Jones turned the $2,000 over to the University for the establishment of the Theodore Smith Fund.

The Revolving Emergency Fund for Men—A fund to meet emergencies of University men was established in October, 1931. The principal of this fund amounts to about $3,000. H. E. Stone, founder of the fund, is treasurer. Loans are made in small amounts and for short periods of time. About 2,400 loans have been made from this fund since it was established. In 15 years its loans have aggregated approximately $25,000.

The Baltimore and Ohio Railroad Fund—A special fund for small loans to students registered in the College of Agriculture has been established by the Baltimore and Ohio Railroad. The Secretary of Loan Funds acts as treasurer of this fund.

The Chauncey Watson Boucher Fund—This fund was established in 1936 by former President C. S. Boucher in memory of his father. Seniors from

West Virginia may borrow only for the payment of University fees. Loans must be repaid within two years and are without interest.

The Charles E. Lawall Fund—Established in 1939 for small loans to worthy students in need of aid; available to students whose scholastic record has been satisfactory; interest payable only for periods in excess of time for which the loan is granted.

Alfred Walker Fund—a special fund for loans to Pharmacy students, established in 1938 by Dean J. Lester Hayman in honor of the memory of Mr. Alfred Walker of Sutton, first president of the West Virginia Pharmaceutical Association and, for many years, secretary of the State Pharmaceutical Association.

The John W. Davis fund, established for the making of loans to outstanding law students, aids worthy students each year.

The P. C. Thomas Fund—In May 1943 the P. C. Thomas loan fund was established in memory of the late P. C. Thomas of the Koppers Coal Company. The initial contribution made by employees of the Company was $520.

The Kellogg Foundation Fund—The Kellogg Foundation in 1942 allotted $5,000 to West Virginia University for loans to students in the School of Medicine. Loans from this fund may not exceed $150 during any academic year. The total loan to one student may not exceed $250. Interest is charged at the rate of 2 percent. Students may not borrow until after the successful compleion of one term in the School of Medicine.

The Leon Leonian Memorial Fund—Established in July 1945 in honor of the memory of Dr. Leon H. Leonian. Small loans are made to students for short periods without interest. More than 50 students have already been helped by this fund.

The Loyalty Permanent Endowment Loan Fund of the W. V. U. Alumni Association—This fund was established some years ago by contributions of alumni and other friends of the University. It is a permanent trust fund, the income of which is available to worthy students.

West Virginia State Conference of Social Work Fund—In 1940 the State Conference of Social Work established a student loan fund for the department of social work, such fund to be granted, without interest, to eligible full-time graduate social-work students who are residents of West Virginia.

Many off-campus loan funds cooperate with the Office of the Secretary of Loans and Placement. These include the funds of various Masonic and other fraternal bodies, social fraternities, civic clubs, church boards, religious associations, and other organizations. The Morgantown Rotary Club fund has also aided many men by small loans in emergencies. Information concerning those funds may be obtained from the Secretary of Loans and Placement.

PRIZES, TROPHIES, AND MEDALS

Prizes

Awards for prizes in the University are made in accordance with the following rules:

No composition, in whole or in part, shall be submitted in competition for two prizes.

Only students pursuing courses leading to baccalaureate degrees are eligible for any prize offered, except for the James F. Brown prize.

No student shall be eligible to enter any contest who has not been a resident student in this University for at least one semester preceding the semester in which the contest is to be held, and who, unless he be a competitor for the James F. Brown prize, is not a resident student in good standing in the University in the semester in which the contest is held.

No successful contestant may become for a second time a competitor for the same prize.

If in any contest the judges find no manuscript of sufficient merit, there shall be no award of the prize for that year.

Students intending to compete in any essay-writing contest must notify the chairman of the Committee on Prizes not later than March 15. Three typewritten copies of each essay must be in the hands of the chairman of the committee not later than May 15.

The conditions upon which the awards in the several contests are made may be learned upon application to the office of the Director of Student Affairs or to the members of the Committee on Prizes.

The Tax Commission Prize—The honorable members of the State Tax Commission of 1902, namely, W. P. Hubbard, Henry G. Davis, John K. Thompson, L. J. Williams, and J. H. Holt, gave the sum of $1,350, later increased by unawarded sums to $1,500, the income of which is to be used annually as a prize for the "best original work bearing on matters of taxation in West Virginia." The conditions of the competition are determined by the Council of Administration. The amount of the prize at present is $50. The subject assigned for 1947-48 is "Valuation of property for state tax purposes in West Virginia."

The James F. Brown Prize—The Hon. James F. Brown, an alumnus of the University, "with a desire to stimulate the young men of the State to fuller consideration of the 'inalienable right' of mankind, and especially those guaranteed by the Constitution of the State and the United States," has contributed $5,000 to the University, the income of which is to be "used as a prize for the best essay or paper each year on the subject of the individual liberties of the citizen as guaranteed by the Constitution." The income may be given as a single prize, or it may be divided into a first and second prize. For the present the award will be made as a single prize, $200 in amount. Any regularly enrolled student in any school or college of the University or any student within one year after receiving an undergraduate degree may compete for this prize. Graduates of the College of Law or of the School of Medicine or holders of any post-graduate degree are not eligible to compete for this prize. The subject assigned for 1947-48 is "The constitutional status of political parties and their members."

The West Virginia State Pharmaceutical Association Prize—The West Virginia State Pharmaceutical Association offers to the student making the best set of drawings in Pharmacy 10 a two-year, paid-up membership in the American Pharmaceutical Association.

The Waitman Barbe Memorial Prize—The English Club of West Virginia University offers an annual prize of $25 in memory of Waitman Barbe, poet,

scholar, and adviser of the English Club during his long term of service on the faculty. The prize is awarded to some student regularly enrolled as a junior or senior in West Virginia University, for creative work in the field of literature, either in prose or poetry or both. The minimum length of such composition must be 4,000 words in prose or 100 lines in poetry.

The Board of Governors Military Essay Prize—The Board of Governors of West Virginia University each year offers a prize of $50 to the cadet in the Division of Military Science and Tactics "who shall write the best essay on preparation against war."

Chi Omega Sorority Prize—The Chi Omega sorority offers an annual $15 prize to the sociology major with the highest academic ranking. All work done at West Virginia University is taken into account and no student is eligible to compete for the prize unless his junior and senior years have been spent at West Virginia University. The prize is awarded at the annual June Commencement.

Phi Lambda Upsilon Fraternity Prize—Phi Lambda Upsilon, honorary chemical fraternity, offers annually the Alexander Reed Whitehill award to the student receiving the highest grade in chemistry during the freshman year. The award consists of an engraved ornament.

The R. A. West Prize for Engineering Students—R. A. West, an alumnus of the University, because of his interest in the College of Engineering and in the young men who have been and are students there and with the further idea of promoting sound scholarship, offers a prize of $50 to the member of the graduating class of the College of Engineering in June who has maintained the highest scholarship as measured by his honor-point average.

Tau Beta Pi, honorary Engineering fraternity, each year offers an engraved cup to the sophomore Engineer who during his freshman year maintained the highest average in his class.

The Nathan Burkan Memorial Prize—The American Society of Composers, Authors, and Publishers has established the Nathan Burkan Memorial Competition, open to the leading universities and colleges of the country that offer a course in law. A prize of $100 is available in each institution, to be awarded to the student in the graduating class in law who prepares the best paper on the subject of "Copyright Law."

Prizes in Public Speaking—In each of the four events (debate, oration, extempore speaking, and poetry reading) in the West Virginia Interscholastic Public Speaking Contest a gold medal is awarded to the winner of first place; a silver medal to the winner of second place; and a bronze medal to all other speakers who participate in the semi-finals at the University. Each high school represented by a winner of first place is presented with a beautiful wall plaque with the escutcheon of the University mounted upon it.

The Intercollegiate Peace Association of America provides $100 in cash prizes to be awarded as follows: $50 for first prize; $30 for second prize; and $20 for third prize in the annual Intercollegiate Peace Oratorical Contest. This contest is held under the auspices of the Department of Speech of the University and each institution of higher learning in the state is entitled to send one representative.

West Virginia Oil and Natural Gas Association prize for students in the School of Mines—In order to stimulate interest on the part of oil and natural gas engineering students in their profession, the West Virginia Oil and Natural Gas Association offers a prize of $25 each year to a member of the graduating class of the School of Mines. The student must be enrolled in the oil and natural gas option, and his scholarship must be the highest of that group as measured by his honor-point average.

West Virginia Coal Mining Institute prize for students in the School of Mines—In order to stimulate interest on the part of mining engineering students in their profession, the West Virginia Coal Mining Institute offers a prize of $25 each year to the members of the graduating class of the School of Mines. The student must be enrolled in the coal-mining option, and his scholarship must be the highest of that group as measured by his honor-point average.

The Margaret Ann Cuthbert Music Prize—An annual prize of $25 in memory of his mother has been established by Frank Cuthbert, Director of the School of Music. It is awarded to the outstanding senior graduating from the School of Music and chosen by the faculty of that school for high scholastic standing and professional promise.

The James Wimer Memorial Award—This award pays tuition for one year. The donor desires anonymity. The award is given to the senior making the highest average in his first three years in chemical engineering.

Trophies

Alpha Epsilon Delta Prize—The Alpha of West Virginia chapter of Alpha Epsilon Delta offers each year a silver cup to the freshman pre-medical student who has made the best scholastic record for the year in chemistry and zoology.

The Inter-Fraternity Scholarship Trophy—Professor Arleigh Lee Darby of the department of Romance languages and literature offers a silver cup known as the Inter-Fraternity Scholastic Trophy. It is awarded at the end of the University year to the fraternity having the highest average scholarship standing for that year and is to remain in the possession of that fraternity during the following year. The cup becomes the permanent property of the fraternity that first wins it five times.

The George C. Baker Trophy—The Hon. George C. Baker, graduate of the College of Law, offers a silver loving cup, possession of which is awarded each year to the Club Court in the College of Law winning the inter-club competition.

The School of Physical Education and Athletics offers two trophies to the fraternities scoring the highest and second-highest number of points in the all-year athletic competition for fraternities.

Pan-Hellenic Association Scholarship Cups—The Pan-Hellenic Association offers two scholarship cups. Any sorority which is a member of the Women's Pan-Hellenic Council may compete for the cup, and it is awarded each year to the group having the highest average. The woman's fraternity which has maintained the highest average for three consecutive years is given permanent possession of the cup. The Pan-Hellenic Association also offers a cup each year to the pledge group which maintains the highest average.

Medals

The Lehn and Fink Medal—Through the generosity of Lehn and Fink, manufacturing chemists of New York City, the College of Pharmacy awards each year to the senior pharmacy student who, in the opinion of the Faculty of the College of Pharmacy, attains the highest scholarship a gold medal. The medal is appropriately engraved.

HONOR SOCIETIES

Phi Beta Kappa—The Alpha of West Virginia chapter of the Phi Beta Kappa Society is established at the University. Stated meetings or public exercises of the society are held twice annually; the anniversary meeting on December 5, and the annual meeting during Commencement Week. The honor of membership may be conferred upon candidates for the degree of Bachelor of Arts who have maintained a high scholarship rank during their college course; also, upon members of the faculty and alumni of the University, and upon distinguished citizens of the state.

Sigma Xi—The Society of the Sigma Xi is a national honorary society devoted to the advancement of research in pure and applied science. Membership may be conferred upon faculty members and students who show outstanding ability in some field of scientific research.

Tau Beta Pi—The West Virginia Alpha chapter of the national engineering honor association of Tau Beta Pi was established in the College of Engineering in 1922. Students who rank in scholarship among the upper one-eighth of their class are eligible to election in their third year and all who rank among the upper one-fourth of the class are likewise eligible in their fourth year. These together with alumni and honorary members constitute the chapter.

Alpha Zeta—The West Virginia chapter of Alpha Zeta, the national agricultural honor fraternity, was instituted in the College of Agriculture in 1921. Sophomores and upperclassmen who maintain high standing in scholarship and rank among the upper two-fifths of their respective classes are eligible to membership.

Phi Upsilon Omicron—The Lambda chapter of Phi Upsilon Omicron, one of the national professional organizations in home economics, was established at the University in November, 1923. Its purpose is to promote the moral and intellectual development of its members, to help develop leadership, and to advance home economics. Membership is open to juniors and seniors in home economics who rank in the upper two-fifths of the class in scholarship and who meet certain personality standards.

Phi Lambda Upsilon—The Tau chapter of Phi Lambda Upsilon, national chemical honor fraternity, was established at the University in 1924. The chief object of the society is the promotion and protection of high scholarship and original investigation in all branches of pure and applied chemistry. Seniors and juniors who have attained a high standard of scholarship and character are eligible for membership.

Sigma Gamma Epsilon—Upsilon chapter was established at West Virginia University in 1927. The fraternity has for its objects the social, scholastic

and scientific advancement of its members, the extension of the relations of friendship and assistance between the universities and scientific schools with recognized standing in the United States and Canada, and the upbuilding of a national college society devoted to the advancement of geology, mining, metallurgy, and ceramics. Seniors and juniors in the courses indicated, who have attained high scholarship rank, are eligible for membership.

Order of the Coif—A chapter of the Order of the Coif, a national law school honor society, was installed in 1925. Its members are selected by the Law faculty from the 10 percent of the senior class in the College of Law ranking highest in scholarship.

Phi Epsilon Phi—Phi Epsilon Phi, botanical honor fraternity, was founded at West Virginia University in 1929. The fraternity has for its purpose the promotion of high scholarship, the inciting of interest in botanical research, and the encouragement of professional ideals. Seniors and graduate students who are engaged in botanical work and who have attained a high standard of scholarship and character are eligible for membership in the organization.

Kappa Tau Alpha—National journalistic honor society with special emphasis on high scholarship and the best professional ideals. There are chapters in 22 universities. The West Virginia chapter was established in 1930.

Sigma Pi Sigma—Theta chapter of Sigma Pi Sigma, national physics honor society, was installed in the University in 1929. The formal statement of the objects of the society is: "To reward high scholarship and promote interest in the advanced study of physics, to stimulate individual research, and to enable its members to keep pace with the progress of science." A student elected to membership must be taking some course in physics at the time of his election. Graduate students who are taking advanced work in physics and related subjects are eligible for membership.

Kappa Delta Pi—Kappa Delta Pi, national honorary educational society, installed Alpha Upsilon chapter at West Virginia University, July 21, 1927. Election to this fraternity is conditional upon high scholarship and desirable personal and professional qualities.

Alpha Epsilon Delta—The Alpha of West Virginia chapter of Alpha Epsilon Delta was established at West Virginia University in 1930. The chief object of the society is the promotion of high scholarship among pre-medical students. Juniors and seniors of high scholarship and character are eligible for membership.

Pi Tau Sigma—The West Virginia Pi Gamma chapter of Pi Tau Sigma was installed at West Virginia University on March 31, 1942. This is an honorary mechanical engineering fraternity with chapters in 35 universities. Seniors and juniors in mechanical engineering who have attained high scholarship rank are eligible for membership.

Eta Kappa Nu—Eta Kappa Nu, an electrical engineering honorary society installed at West Virginia University in 1946, is open to students in the upper fourth of the junior class and in the upper third of the senior class.

Scabbard and Blade—C Company, Second Regiment, West Virginia University, the National Society of Scabbard and Blade, was installed on May 21, 1916. The society believes that military service is an obligation of citizenship and that the greater opportunities afforded college men for the study of military

science place upon them certain responsibilities as citizens. The purpose is to create and unite in closer relationship the military departments of American universities and colleges; to preserve and develop the essential qualities of good, efficient officers; to prepare themselves as educated men to take a more active part and to have a greater influence in the military affairs of the communities in which they may reside; and above all to spread intelligent information concerning the military requirements of our country. The society, inactive during the war, was reactivated on the Univesity campus during the school year 1946-47. Advanced Course ROTC students who maintain high standing in scholarship, leadership, character, and efficiency are eligible for membership.

OTHER UNIVERSITY ORGANIZATIONS

There are in the University various fraternities, sororities, societies, and clubs devoted chiefly to the social, educational, and athletic interests of the students. Some of the more important of these organizations are:

National and Greek Letter Societies

SOCIAL FRATERNITIES

Men

Beta Theta Pi
Delta Tau Delta
Kappa Alpha
Kappa Sigma
Phi Delta Theta
Phi Kappa Psi
Phi Kappa Tau
Phi Sigma Delta
Phi Sigma Kappa
Pi Kappa Alpha
Pi Lambda Phi
Sigma Chi
Sigma Nu
Sigma Phi Epsilon
Tau Kappa Epsilon
Council of Fraternity Presidents

Women

Alpha Delta Pi
Alpha Phi
Alpha Xi Delta
Chi Omega
Delta Gamma
Kappa Kappa Gamma
Pi Beta Phi
Sigma Delta Tau
Pan-Hellenic Association

PROFESSIONAL FRATERNITIES

Men and Women

Alpha Kappa Psi (Economics)
Alpha Psi Omega (Dramatic)
Delta Phi Alpha (German)
Delta Sigma Rho (Forensic)
Eta Sigma Phi (Latin)
Phi Delta Phi (Law)
Phi Alpha Delta (Law)
Phi Beta Pi (Medical)
Phi Chi (Medical)

National and Local Organizations

Agricultural Club
Associated Women Students
Ahtletic Managers Club
Cadet Hop Association
Camera Club
Christian Youth Council
Circolo Italiano (Italian)
Dames Club
Der deutsche Verein (German)
Dolphin Club (Physical Education)
English Club
F. F. A. Club (Collegiate)
Forestry Club
Public Affairs Club
Rhododendron (Junior women)
Rowan Rifles (Military)
Scabbard and Blade (Military)
Sociology and Social Work Club
Speech Club
Sphinx (Senior men)
"Spiked Shoe" (Track and field)
Student Forum
University Band
University 4-H Club
University and Community Chorus
University and Community Orchestra

Forum
Future Teachers of America
Home Economics Club
International Relations Club
Journaliers (Men, Journalist)
La Tertulia (Spanish)
Le Foyer Francais (French)
Li-Toon-Awa (Sophomore women)
McDowell Club
Matrix (Women, Journalistic)
Men's Glee Club
Mortar Board (Senior Women)
Mountain (Men)
Outing Club
Orchesis (Women, Physical Education)
Philological Society
Physical Education Club
Pre-Law Fraternity
Press Club (Journalism majors)
University Religious Council
University Scientific Society
Veterans' Association of World War II
Woman's Hall
  North Wing
  South Wing
Women's Recreation Association
Women's Glee Club
Women's Pan-Hellenic Association
  (Intersorority)
Student branches of the following:
  Amer. Inst. of Chemical Engineers
  Amer. Society of Civil Engineers
  Amer. Inst. of Electrical Engineers
  Amer. Society of Mechanical
    Engineers
  Amer. Inst. of Mining and
    Metallurgical Engineers
  Society of American Military
    Engineers
Xi Gamma Iota (ex-G. I. women)

Faculty Organizations

American Association of University Professors—The West Virginia University chapter of the American Association of University Professors now has a membership of approximately 50. The present officers are: F. P. Summers, president; A. S. Abel, vice-president; Ruth D. Noer, secretary-treasurer.

Faculty Club—The Faculty Club of the University, organized on March 10, 1921, is composed of the teaching, research, and extension staffs of the institution. The club rents a house at the corner of Pleasants and Spruce Streets which serves as a club house and residence. Meals are served to members and their guests. The clubrooms provide a center for social activities of members of the Faculty.

Campus Club—The Campus Club is a social organization made up of women on the University staff as well as the wives of men on the staff. The club holds meetings twice each month and special meetings and functions at other times.

Cornell Club of Morgantown—The Cornell Club of Morgantown is an alumni social organization founded in 1925. Membership is open to graduates and former students of Cornell University who live in this region and to their husbands and wives. The club holds an annual meeting and dinner and other occasional meetings at which speakers from Cornell are heard. The officers are: president, F. D. Cornell, Jr.; vice-president, J. H. C. Martens; secretary, W. H. Childs; treasurer, D. W. Parsons.

West Virginia Alumni Association of Johns Hopkins—The West Virginia Alumni Association of Johns Hopkins, founded in 1913, holds annual meetings on February 22, the anniversary of the establishment of Johns Hopkins University. Graduates and former students of Johns Hopkins are eligible for membership. Elizabeth M. Stalnaker is president; Dr. Dorsey Brannan, vice-president; and O. D. Lambert, secretary.

Wisconsin Alumni Club—Graduates and former students of the University of Wisconsin are eligible to membership in this organization, which holds social meetings at which speakers from that university are heard. Edw. H. Tyner is the present president of the club, organized in 1937.

PUBLICATIONS

University Publications

The following publications are issued regularly at the University:

1. The **West Virginia University Bulletin**, issued monthly during the year. The series includes the Catalogue of the University and the Announcements of the various colleges and schools as well as other occasional publications.

2. The bulletins and circulars of the Agricultural Experiment Station.

3. The circulars of the Agricultural Extension Division, including the **Farm Women's Club** leaflets, the **4-H Suggestions**, the **Treasures of the Trail**, the **West Virginia Farm News** (in cooperation with the West Virginia Farm Bureau), and special pamphlets.

4. Agricultural News Service bulletins published weekly by the College of Agriculture.

5. The bulletins of the Engineering Experiment Station and of the School of Mines.

6. The **West Virginia Law Quarterly**, the official publication of the West Virginia Bar Association, edited by the faculty of the College of Law.

7. Miscellaneous publications under the title of **Philological Studies** or **Biological Studies.**

8. The **Student Directory**, the annual directory of the student body, published by the University Book Store.

9. The annual **Proceedings** of the West Virginia Academy of Science.

10. The West Virginia **Fourth Estatesman**, a quarterly publication edited by the faculty of the School of Journalism.

Student Publications

The **Daily Athenaeum**, University student newspaper, is published daily Tuesday through Saturday, by students of the School of Journalism. Heads of the editorial and business staffs are elected by the student body from candidates certified by the School of Journalism faculty and approved by the Committee on Student Publications.

The **Monticola**, student yearbook of the University, is usually published by upperclassmen. The editorial and managerial staff is elected by the student body.

The **Moonshine**, student humorous magazine, is published by a staff chosen from the student body.

The **Freshman Handbook** is published annually by a selected group of students and is distributed to each member of the entering class. It is wholly a nonprofit enterprise.

The **Cruiser**, a student forestry yearbook, is published by the West Virginia University Forestry Club. The managing editor is appointed by the executive board of the club.

All student publications are under the supervision of the committee on Student Publications.

ASSOCIATED INSTITUTIONS

The West Virginia Academy of Science

Organized in 1924 to bring about closer affiliation among the scientists of the state and to encourage the pursuit of scientific work throughout the commonwealth, the West Virginia Academy of Science is a body of nearly 300 men and women who are interested in the service of science in the development of the state. The members are widely distributed throughout the state and are representative of colleges, high schools, and industries. Annual meetings, held at the various institutions of higher learning, are divided into sections on biology, chemistry, geology and mining, mathematics and physics, and social sciences. The Proceedings of the annual meetings are published under the auspices of the University and of the Academy.

The West Virginia Geological and Economic Survey

The West Virginia Geological and Economic Survey, situated at West Virginia University, is governed by its own commission and receives separate appropriations.

The Geological Survey was founded by an Act of the Legislature in 1897 and has functioned consistently since that date. It is recognized as one of the leading state surveys.

One of the major purposes of the Survey is to have members of its staff, specialists in their field, investigate all the natural resources, and especially the mineral resources, of the state and to make the results of the investigations available to the public in the form of written reports and maps.

Acomplishments of the Survey include the complete topographic mapping of the state on 1-mile-to-the-inch quadrangles; the complete geologic mapping of the state by counties, and a state geologic map; the complete mapping of the soils of the state by counties; and the state relief map (scale 1 inch equals 4 miles).

Numerous special reports also have been made on coal, oil, gas, clays, limestones and cement, iron ores and building stone, mineral springs, manganese, deep-well records, salt brines, rock salt, and forest and wood industries.

The professional staff of the Survey is composed of six geologists, three chemists, and a spectroscopist. Some of the staff members of the Survey serve as part-time teachers in the department of geology of the University, and there is close cooperation between the department and the Survey. Several members of the staff who served in the Army and Navy on leave of absence have now returned to their former positions.

Government of the Survey is vested in the Geological Survey Commission, composed of the Governor of West Virginia, the State Treasurer, the Commissioner of Agriculture, the President of West Virginia University, and the Director of the Agricultural Experiment Station.

The West Virginia Biological Survey

The West Virginia Biological Survey is an organization of voluntary workers whose purpose is the collection of information of every kind about the plants and animals of the state.

The executive committee consists of a biologist from each of the colleges of the state with a chairman, secretary, and curator. There are no dues, and membership is open to all persons interested in the work of the Survey.

The repository for the plant and animal collections is in Science Hall, West Virginia University, Morgantown, and Marshall College, Huntington. Under the direction of the Survey a series of bibliographies dealing with the biology of the state is being published.

The Survey, in cooperation with the Carnegie Museum, Pittsburgh, Pennsylvania, during several summers has maintained one or more field collectors whose work has taken them into all parts of West Virginia. An increase in knowledge of biological conditions in the state has resulted from this work.

The State Road Commission

The Materials Laboratory of the State Road Commission is housed in Mechanical Hall of the University. Its work includes the testing of all materials used by the Commission and also research on problems of road construction and maintenance in West Virginia.

Part III

Curricular Requirements and Courses of Instruction in the Colleges, School, and Divisions

ABBREVIATIONS FOR PART III

The following abbreviations are used in the announcements of courses:

I—A course given in the first semester.

II—A course given in the second semester.

I, II—A semester course given in each semester.

I and II—A course given throughout the year.

s—A course offered only in the Summer Session.

Hrs.—Number of credit hours per course.

PR—prerequisite.

†—Course omitted, 1947-48.

THE PLAN FOR NUMBERING COURSES

For convenience each course of study is designated by the name of the department in which it is given and by the number of that course. The plan of numbering is as follows:

Courses 1 to 99—courses intended primarily for freshmen and sophomores.

Courses 100 to 199—courses intended primarily for juniors and seniors.

Courses 200 to 299—advanced courses open to juniors, seniors, and graduate students.

Courses 300 to 399—courses open to graduate students only.

SCHEDULES

Before the opening of each semester, a schedule is printed announcing the courses to be offered in that semester in the College of Arts and Sciences, the College of Education, the School of Music, the School of Physical Education and Athletics, the School of Journalism, and the Division of Home Economics in the College of Agriculture, Forestry, and Home Economics. Schedules are prepared for the College of Agriculture, the College of Engineering, the College of Law, the College of Pharmacy, and the School of Medicine but are not printed. A complete schedule of all courses offered in the Summer Session is printed in the Summer Session Bulletin.

The College of Agriculture, Forestry, and Home Economics

ORGANIZATION

All the agricultural, forestry, and home economics work of the University is organized under the College of Agriculture, Forestry, and Home Economics. For the purpose of administration the College is divided into three branches: viz.,

I. The Agricultural Experiment Station, organized for research and experimental work.

II. Resident instruction in agriculture, in forestry, and in home economics.

III. Extension work in agriculture, forestry, home economics, and boys' and girls' club work, given by the Division of Agricultural Extension to citizens of the state who are not in residence at the College.

The work of these divisions is closely interrelated. Although some members of the staff devote full time to college instruction, research, or extension work, many others divide their time among two or three of these divisions.

The Standing Committees

STUDENTS' COURSES AND HOURS: MESSRS. ORTON, PEAIRS, PARSONS, PERCIVAL; MISS NOER.

SCHOLARSHIP: MESSRS. POHLMAN, PERCIVAL; MISS DIETRICH.

STUDENT PLACEMENT AND FARM PRACTICE: MESSRS. LIVESAY, PARSONS, MARSH, POHLMAN, SUDDS, HENDERSON.

LIBRARY:[4] MESSRS. DUSTMAN, CARTLEDGE, SUDDS, ARMENTROUT, ERICKSON, LEACH; MISS PALMER.

STATION STAFF COMMITTEES

STATION PROJECTS: MESSRS. CLARK, COLMER, ARMENTROUT.

STATION PUBLICATIONS: MESSRS. WILSON, TAYLOR, PEAIRS.

STAFF CONFERENCES: MESSRS. HYRE, HYATT, TRYON.

The Agricultural Experiment Station

The Agricultural Experiment Station was established in the University by the Board of Regents in 1888 by authority of an act of Congress known as the Hatch Act. Further support was given by acts of Congress known as the Adams Act, approved June 30, 1906, the Purnell Act, approved February 24, 1925, the Bankhead-Jones Act, approved June 29, 1935, and the Flannagan-Hope Act, approved August 14, 1946. The work of the Station is supported also by state appropriations.

[4]Joint Committee of the College and Experiment Station.

Investigations are being conducted in the fields of animal husbandry, animal pathology, dairy husbandry, poultry husbandry, field crops, horticulture, entomology, plant pathology, agricultural biochemistry, soils, land use, water problems, farm economics, farm mechanics, forestry, physiology, nutrition, hillculture, bacteriology, and mycology, classified into about 100 research projects.

In addition to the five farms situated at Morgantown, described elsewhere in this Catalogue,[1] branches of the Agricultural Experiment Station are maintained at Wardensville, Hardy County; Lakin, Mason County; Kearneysville, Jefferson County; and Reedsville, Preston County. Experimental work is also being carried on elsewhere throughout the state.

Agricultural Extension

By act of the Legislature of 1913, amended in 1915, "in order to promote the improvement and advancement of agriculture, domestic science, and rural life among the people of the several counties of the state," there was "created and established in the College of Agriculture an Agricultural Extension Division to be coordinate with the resident instruction division and the Agricultural Experiment Station" of the College. This service is financed and administered with the cooperation of federal, state, and county governments.

The work originally undertaken has been expanded to include the 4-H Club Camp for boys and girls, established at Jackson's Mill in 1921 for the purpose of teaching standards of excellence in agriculture and home economics, and the recreation center, established at Oglebay Park (Wheeling) in 1926, which has undertaken the task of developing adequate programs for improving the use of leisure time of both rural and urban citizens and for the training of community leaders.

Short Courses and Special Schools

In addition to the instruction of collegiate grade offered, the College of Agriculture maintains a series of annual short courses and special schools for the benefit of adult residents in the state who wish to obtain, in brief periods, education in certain fields. This series includes the Dairy and Ice Cream Short Course, the Horticulture Extension School, Farm and Home Week, Junior Farmer's Week, and the Junior Homemakers' Conference.

THE DIVISION OF AGRICULTURE

The training offered in agriculture is directed to fit the student for farm life or professional and business fields. Graduates may engage in farming as managers or as farm owners, in the teaching of agriculture in high schools or colleges, in extension work as county agents or specialists, in research work in experiment stations or other organizations, or in many of the federal activities in aid of agriculture. They may engage in business related to farming, such as dairy manufacturers, meat processing, seeds and nursery stock, feeds and fertilizers, or marketing

[1]See page 35.

The curriculum leading to the degree of Bachelor of Science in Agriculture is designed to provide a broad and well-grounded training in the general field of agriculture so that the graduate may be prepared for occupations requiring such general knowledge, and may have the necessary foundation for such specialization as he may elect to pursue.

All candidates for the degree will follow a uniform curriculum for the first two years, which includes courses in the sciences that are fundamental to agriculture, together with certain specified courses in agriculture. During the third and fourth years a certain amount of selection is permitted which will enable the student to meet special requirements in various fields, such as animal industry, plant industry, dairy manufacturers, and agricultural education. In the last-mentioned field he may qualify for the teacher's certificate in Vocational Agriculture. Or the student may make the elective work broader in its scope and prepare for some phase of extension activity or for general farming; or he may choose the Agricultural Science curriculum, which will serve as a foundation for later graduate work in some scientific phase of agriculture.

For the use of the students the following laboratories are maintained in the college: agricultural chemistry, agronomy, soils, genetics, animal husbandry, animal pathology, dairy husbandry, entomology, farm economics, farm shop work, horticulture, nutrition, plant pathology, and poultry husbandry.

The Curriculum in Agricultural Science

Students who expect to do graduate work in preparation for teaching agricultural science in colleges and universities or for research work in experiment stations, or for other work in specialized fields of basic agicultural science, should register for the Curriculum in Agricultural Science. Only those students who have a high-school record above the average and who are capable of maintaining a scholarship average of B or above should follow this curriculum. Success in graduate work will depend upon better-than-average undergraduate scholarship, and such undergraduate work must include adequate preparation in biology, mathematics, English, and foreign languages. The degree of Bachelor of Science is conferred upon the satisfactory completion of this curriculum.

The Combined Degree: A. B., and B. S. in Agriculture

Students who desire a broader training than that furnished in the curriculum leading to the degree of Bachelor of Science in Agriculture are reminded that, by proper arrangement of their courses, they may obtain both degees in five years. Such students normally will take first the degree of Bachelor of Arts in the College of Arts and Sciences, usually with major work in the field of biology. For particulars. see the **Announcements** of the College of Arts and Sciences.

The Two-year Curriculum Leading to the Certificate in Agriculture

Students who may wish to acquire technical training in the field of scientific agriculture, but who do not care to meet all the requirements for the degree of Bachelor of Science in Agriculture, may register for the two-year curriculum leading to the Certificate in Agriculture. Requirements for entrance are the same as for the four-year course, namely, a high-school diploma. The first year's work is designed to give the student basic studies in some of the principal fields of Agriculture. The second year's work is more flexible, allowing the student to specialize in some field of Agriculture if he so desires.

Seventy hours of work are required, this work to include 6 hours of English, 2 hours of physical education, and 6 hours of military science (if not exempted). At least 45 hours of credit must be taken in the College of Agriculture. Students in this curricculum can complete this course without regard to honor points; however, no credit can be transferred to the four-year course unless the grade in each course is C or above.

Graduate Work

Graduate work leading to the Master of Science degree is offered in all branches of agriculture and in home economics education. In certain branches also, courses leading to the degree of Doctor of Philosophy are offered. The student who plans to pursue graduate work is directed to the Graduate School announcements in the University Catalogue. Advancement in any of the professional fields is dependent on graduate study, and the student desiring to pursue such work should plan to continue in graduate study immediately upon the completion of the undergraduate curriculum if possible. A limited number of graduate assistantships which permit half-time devotion to study are available in the Division of Agriculture and in the Experiment Station.

Teachers of vocational agriculture may combine graduate course in Agriculture and Education by taking 16 to 20 hours in Agriculture and 10 to 14 hours in Education to fulfill the requirements for the M. S. degree.

REQUIREMENTS FOR THE DEGREE

Credits Required

The degree of Bachelor of Science in Agriculture may be conferred upon any student who satisfies the entrance requirements and offers 144 hours' approved credit for college courses, including all requirements set forth below.

The "semester hour" is the standard for computing the amount of work required for graduation. The "hour" represents the amount of work done in one semester (18 weeks) in one recitation with two preparation hours a week, or three hours' practice or laboratory work requiring no outside preparation.

No student is permitted to register for less than 14 hours or more than 20 hours of work in any one semester without special permission.

Required and Elective Subjects

All the couses for the first two years, and most of the courses for the third year, are definitely required for all students (except majors in vocational agriculture and in dairy manufactures). These courses are shown in the Basic Curriculum. Students who are not required to take military science must substitute elective credits. Agriculture 5, required of students deficient in farm practice, must be completed before the third year. First-year English (English 1 and 2 or their equivalent) must be completed before any upper-division courses may be pursued for credit towards the degree.

The fourth-year college student who wishes a general education in the field of Agriculture, leading toward the Bachelor's degree, is directed to the General Curriculum Agriculture. This course is broad enough to prepare the student to serve as a county agent or in related extension work.

For those who desire more specialized training, five courses are open—animal industry, plant industry, dairy manufactures, vocational agriculture, and conservation. The vocational-agriculture course is the only curriculum which qualifies a student to obtain a teacher's certificate.

After requirements have been met, electives may be chosen, without restriction as to college or department, with the approval of the adviser or of the Committee on Courses and Hours. However, the required and elective hours taken in the College of Agriculture must amount to at least 60 hours. Provision is made for upper-division students who may wish to elect certain lower-division subjects such as languages.

Students who expect to pursue graduate work in Agriculture are advised to matriculate in the Agricultural Science curriculum for their undergraduate courses. This curriculum requires that a minimum of 45 hours be taken in the College of Agriculture in at least five subject-matter divisions.

The Dean of the College of Agriculture will act as adviser for all agriculture students and will assign students to other advisers whom he may designate.

Electives

Elective work to make up the total required for graduation may be chosen from courses in the College of Agriculture or in other colleges of the University with the consent of the adviser or of the Committee on Courses and Hours. Ordinarily, little restriction is placed on the choice of such electives.

Students who offer credit from other institutions shall have their offerings evaluated by the Committee on Courses and Hours, which shall have discretionary powers in the acceptance or refusal of credit to count toward graduation from the College of Agriculture.

THE BASIC CURRICULUM

FIRST YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3
Chemistry 1	4	Chemistry 2	4
Biology 1	4	Botany 5	4
Agriculture 1	2	Agr. Eng'g 2	2
Phys. educ[1]	1	Poultry 1	4
Mil. Sci. 1	1	Phys. educ.[1]	1
		Mil. Sci. 2	1
	*15		19

SECOND YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Chemistry 31[2]	4	D'y. Husb. 12	3
Bact. 41	4	Horticulture 1	4
Agronomy 1	4	Agronomy 2	3
Mil. Sci. 3	2	Zoology 3	4
Geology 1	3	Mil. Sci. 4	2
An. Husb. 11	3	Elective	2
	20		18

THIRD YEAR[3]

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Hort. 102	4	Agr. Econ. 102	3
An. Husb. 101	3	Physics 2 & 4	4
Economics 1		Electives	4
(or)		An. Path. 102	3
Ag. Econ. 101	3	Entomol. 102	4
Physics 1 & 3	4		
D'y. Husb. 111	3		
	17		18

FOURTH YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Pl. Path. 103	3	Agr. 271	2
Electives	16	Electives	16
	19		18

[1]Only 2 hours in the service program accepted toward graduation.
[2]Chemistry 136 (6 hrs.) or 233 (5 hrs.) may be substituted.
[3]In addition to the courses listed above, 2 hours in farm practice must be earned by students with insufficient farm experience. This requirement must be met before the beginning of the junior year (See Agriculture 5).
*Freshmen who give evidence of high scholastic ability may be allowed to take an additional course.

NOTE

Before registering for his junior year, the student should decide upon the field of his major interest and must consult with the head of the department concerned with respect to choice and sequence of electives.

The following specialized courses of study are designed to meet the needs of students interested in certain phases of the profession:

In the general field of **AGRICULTURE**, required courses include Agricultural Economics 104 (3 hrs.) and Forestry 180 (2 hrs.).

In the fields of **ANIMAL, DAIRY,** and **POULTRY HUSBANDRY**, required courses include Animal Husbandry 203 (3 hrs.) and Genetics 111 or 221 (2 or 3 hrs.).

In the fields of **AGRONOMY** and **HORTICULTURE**, required courses include Genetics 221, Agronomy 210, and Agricultural Economics 104 (3 hrs. each), Botany 221 (4 hrs.), and Forestry 180 (2 hrs.). Required also for **Agronomy** students are Mathematics 3 (4 hrs.), Mathematics 4 (2 hrs.), and Agronomy 200 (3 hrs.). Required also for **Horticulture** students are Horticulture 206, 212 or 232, 213, and 209 or 233 (3 hrs. each).

THE CURRICULUM FOR STUDENTS OF DAIRY MANUFACTURES

(following the Basic Curriculum)

The curriculum given below is suggestive as regards subjects and may be varied by the class adviser to meet the needs of individual students, but the curriculum indicates the subjects which are usually advised for students who desire to take major work in dairy manufacturing.

THIRD YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
D'y Husb. 111	3	Agr. Econ. 102	3
D'y Husb. 218*	3	Physics 2 & 4	4
D'y Husb. 107	3	D'y Husb. 102*	3
D'y Husb 103†	3	*(or)*	
Agr. Econ. 101	3	D'y Husb. 104†	3
Physics 1 & 3	4	Agr. Econ. 160*	2
		(or)	
		D'y Husb. 246*	3
		Electives 5 or	6
	19		18

FOURTH YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
D'y Husb. 218*	3	D'y Husb. 104†	3
Agr. Econ. 235	2	*(or)*	
Hort. 102	5	D'y Husb. 102*	3
Agr. Econ. 131	3	D'y Hus. 204	4
Electives	5	D'y Husb. 222	4
		D'y Husb. 246*	3
		(or)	
		Agr. Econ. 160*	2
		Electives 4 or	5
	18		18

THE CURRICULUM FOR TEACHERS OF VOCATIONAL AGRICULTURE[4]

The State Board of Education has set up definite requirements applicable to all college graduates desiring to teach in West Virginia high schools. These requirements specify the kind and number of various sciences and agricultural courses as well as courses in professional education subjects, all of which are necessary to qualify graduates for certification. The following curriculum, which embodies such courses required for certification, is designed to prepare the qualifying student for a teaching career in the specialized field of vocational agriculture, with provision for teaching biology as a second subject. It also satisfies the requirements for the B. S. Agr. degree.

To meet state requirements for teaching vocational agriculture a total of 50 hours in Agriculture is required as provided in the following curriculum.

The complete statement of the requirements for certification to teach subjects related to agriculture will be found in the announcements of the College of Education.

THIRD YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
An. Husb. 101	3	Agr. Econ. 102	3
Hort. 102	4	Agr. Eng'g 153	3
Econ. 1		English	3
(or)		Hist., political	
Agr. Econ. 101	3	sci., or geog.	3
Agr. Eng'g 152	3	Educ. 109	2
Educ. 106	3	Entomology 102	4
Dairy 111	3		
	18		18

FOURTH YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Plant or animal		Educ.	2
pathology	3	Educ. 214	2
Social science	3	Educ. 120	2
Education 160	3	Educ. 224	4
Agr. Econ. 104	3	Speech 11	3
Phys. Ed. 180	2	Agr. 271	2
Electives	2	Rural Org. 118	2
Educ.	2		
	18		17

†Offered in alternate years.

*Offered in alternate years; not available in 1947-48.

[4]For a list of subjects required to teach non-vocational agriculture, see the bulletin, **Requirements Applicable to Degrees and to Teacher Certification.**

THE CURRICULUM IN AGRICULTURAL MECHANICS

This curriculum is intended for teachers of vocational agriculture who choose agricultural mechanics as a teaching field. If the fifth year is taken, the student can obtain his Master's degree in some agricultural field. Otherwise, eight hours must be taken in the summer to complete the teaching requirements. This curriculum fulfills the requirements to teach industrial arts or general shop in the high school.

THIRD YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Hort. 102	4	Agr. Econ. 102	3
An. Husb. 101	3	Mech. Eng'g 20	3
Agr. Econ. 101	3	Speech 11	3
Education 106	3	Math. 2	3
English	3	Education 109	2
Health Ed. 180	2	Agri. Eng'g 153	3
		Social Science	3
	18		20

FOURTH YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Plant or animal pathology	3	Math. 10	3
Agr. Econ. 104	3	Educ. 160	3
Social Science	3	Education 120	2
Agr. Eng'g 170	3	Educ. 214	2
Educ	2	Educ. 224	4
Mech. Eng'g 24	2	Mech. Eng'g 12	1
Mech. Eng'g 11	2	Mech. Eng'g 15	2
		Agriculture 271	1
	18		18

FIFTH YEAR

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Agricultural Engineering 252	3	Agricultural Engineering 253	3
Electives	12	Education 294	2
		Electives	10
	15		15

THE CURRICULUM IN CONSERVATION

FIRST YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Biology 1	4	Agr. Eng'g 1	3
Chemistry 1	4	Botany 5	4
English 1	3	Chemistry 2	4
Mathematics 2	3	English 2	3
Mil. Sci. 1	1	Mathematics 10	3
Phys. Ed. 1	1	Mil. Sci. 2	1
Agriculture 1	--	Phys. Ed. 2	1
		Conservation 2	0
	16		19

SECOND YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Agronomy 1	4	Botany 30	4
Chemistry 31	4	Entomology 2	4
Civil Eng'g 5	4	Physics 2 & 4	4
Physics 1 & 3	4	Zoology 3	4
Mil. Sci. 3	2	Mil. Sci. 4	2
	18		18

Summer Session Following Sophomore Year

Conservation 101s (Conservation of Renewable Resources) ---------- 2 Hrs.
To be given at State 4-H Camp, Jackson's Mill, during the first two weeks of the second summer term.

Agricultural Engineering 151s (Mechanics of Soil and Water Conservation) ---------- 4 Hrs
To be given on Campus after Conservation 101s.

THIRD YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Agr. Econ. 101	3	Agron. 102	3
Botany 131	4	An. Husb. 104	4
Geol. 1 & 2	4	Conserv. 150	3
Hort. 103	3	Forestry 180	2
Pl. Path. 103	3	Forestry 181	2
		Elective	3
	17		17

FOURTH YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Agr. Econ. 104	3	Agron. 220	2
Agron. 205	2	Climatology	3
Agrn. 215	3	Forestry 182	2
An. Husb. 101	3	Forestry 183	3
Botany 121	2	Elective	8
Elective	5		
	18		18

Summer Employment in Conservation Agency

Recommended Electives: Agronomy 200, 210; Bacteriology 141, 314; Genetics 220, 221; Animal Husbandry 222; Agricultural Economics 102, 131; Entomology 103.

THE BASIC CURRICULUM IN AGRICULTURAL SCIENCE

FIRST YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3
Chemistry 1	4	Chemistry 2	4
Biology 1	4	Botany 5	4
Agriculture 1	2	Math. 3 or 4	4 or 2
Math. 2 or 3	3 or 4	Geology 1	3
Mil. Sci. 1	1	Mil. Sci. 2	1
Phys. educ.	1	Phys. educ.	1
	18 or 19		18 or 20

SECOND YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Organic Chem.	4	Quantitative Chem.	3
Bact. 41	4	Zoology 3	4
Agr. Econ. 101	3	Math. 4 (if not taken earlier)	2
English 13	2	Speech 11	3
Mil. sci.	2	Mil. sci.	2
Elective in maj. field	3 to 5	Electives in maj. field	4 to 6
	18 to 20		18 to 20

THIRD YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Physics 1 & 3	4	Physics 3 & 4	4
*German, French, or Spanish	3	*German, French, or Spanish	3
Electives	11 to 13	Electives	11 to 13
	18 to 20		18 to 20

FOURTH YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Electives	18	Electives	18

*Take in Junior or Senior year.

NOTE:

Students must take 45 hours in the College of Agriculture in at least five subject-matter divisions.

A student may vary from the above curriculum with the approval of his adviser and of the Committee on Courses and Hours.

The student's adviser should be in the field of the student's major.

COURSES OF INSTRUCTION IN AGRICULTURE

Agriculture

DEAN ORTON and STAFF in AGRICULTUURE

Undergraduate Division

1. **Introduction to Agriculture.** I. 2 Hrs. A survey of the history and practice of the general field of agriculture with special reference to opportunities and problems in West Virginia.

Mr. Parsons, Mr. Hill, and Staff in Agriculture

5. **Summer Practice.** No Hrs. A minimum of 12 weeks on an approved farm will be required of each candidate for the degree of Bachelor of Science in Agriculture who has not had the equivalent of at least one year's farm experience after reaching the age of 14 years. Must be done under the direction of the Dean and the Committee on Farm Practice and must be completed before the third year. Open only to students deficient in farm practice.

271. **Agricultural Problems and Organizations in West Virginia.** II. 2 Hrs. Agricultural, topographical, and economic problems. Function of farm programs of numerous agencies. Open for senior and graduate students in social work, home economics, and agriculture.
Staff members of Agriculture and Federal Agencies

280, 281. **Special Topics.** I and II. 2 or 3 Hrs. per semester. Special work may be provided in each of the departments for students having the needed qualifications. The consent of the respective department head is required. Departmental Staffs

Graduate Division

380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester. (See description under this number in each department.) Work for the degree of Master of Science consists chiefly of course offerings and no more than 6 credit hours of research, with special emphasis on a major subject to be selected from one of the several departments. Work for the degree of Doctor of Philosophy is limited to a few selected fields and will consist of research as well as the required course work.
Departmental Staffs

Agricultural Biochemistry

Professor DUSTMAN

Chemistry courses for agricultural and home economics students of undergraduate rank are offered in the College of Arts and Sciences (see Chemistry). Graduate work may be pursued under the general research course outlined under Agriculture, above

280, 281. **Special Topics.** I and II. 2 or 3 Hrs. per semester. Staff
380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester. Staff

CHEMISTRY

31, 131. **Organic Chemistry.** I. 4 Hrs. For students in Agriculture and Home Economics. PR: Chemistry 2. Mr. Dustman

218. **Dairy Chemistry.** I. 3 Hrs. Offered in 1948-49 and alternate years. PR for graduate students: Chemistry 106 or equivalent, Chemistry 31 or 233, and Dairy Husbandry 1; for undergraduates, Chem. 31.
Mr. Dustman

220. **Chemistry of Animal Nutrition.** II. 4 Hrs. Offered in alternate years. PR: Chemistry 6 and 31 and Biochemistry 239, or their equivalents.
Mr. VanLandingham

NOTE: For description of the course in general biochemistry see the Announcements of the School of Medicine.

Agricultural Economics

Professor ARMENTROUT, Associate Professor TOBEN, and Assistant Professors CLARKE and PORTER

Undergraduate Division

101. **Farm Economics.** I. 3 Hrs. Introductory Course. Mr. Armentrout

102. **Farm Economics.** II. 3 Hrs. Principles of economics as applied to agriculture Mr. Armentrout

104. **Farm Management.** I. 3 Hrs. Principles of choosing, equipping, and operating a farm. Mr. Toben
105. **Rural Life.** I. 3 Hrs. Mr. Toben
107. **Farm Records and Accounts.** II. 2 Hrs. Mr. Toben
131. **Marketing Agricultural Products.** I. 3 Hrs. Principles and practices of marketing agricultural products. Mr. Clarke
160. **Dairy Accounting.** II. 2 Hrs. A system of accounts which has been designated especially for the use of medium-size dairy manufacturing plants. Offered in 1948-49 and alternate years. Mr. Armentrout
230. **Cooperative Marketing.** I. 2 Hrs. Principles and practices of cooperative marketing as applied to the marketing of agricultural products and the purchase of farm supplies. Mr. Clarke
235. **Marketing Dairy Products.** I. 2 Hrs. Milk-marketing practices and policies. Mr. Clarke
250. **Agricultural Statistics.** I. 3 Hrs. Sources and methods of collecting and analyzing agricultural statistics; construction of statistical tables, charts, graphs, etc. Mr. Clarke
280, 281. **Special Topics.** I and II. 2 or 3 Hrs. per semester. Staff

Graduate Division

340. **Advanced Farm Management.** I. 3 Hrs. Mr. Toben
341. **Production Economics.** II. 3 Hrs. Advanced study of economic principles of production with special application to agriculture. Mr. Armentrout
342. **Advanced Agricultural Economics.** II. 3 Hrs. Mr. Armentrout
380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester.

Agricultural Engineering

Professor LONGHOUSE and Assistant Professor EMERSON

2. **Farm Shop.** II. 2 Hrs. Instruction in woodworking, cold-metal working, forge work, sheet-iron working, shaping and tempering tools, tool-fitting, harness repair, rope work, and saw conditioning.
151s. **Mechanics of Soil and Water Conservation.** SII. 4 Hrs. Planning and installation of farm land drainage, contour strip cropping, terracing, and farm ponds. Staff
152. **Farm Shop.** I. 3 Hrs. The place of farm shop on the farm. Construction and repair problems including carpentry, metal working, forging, fitting tools, repairing harness, and filing saws. Not open to students who have had Course 2.
153. **Farm Machinery.** II. 3 Hrs. Principles underlying construction, adjustment, care, use, and repair of farm machinery. This will include tillage, harvesting, and seeding machinery. PR: Course 2 or 152. May be taken concurrently.
155. **Household Equipment.** II. 2 Hrs. Planned to help students understand the mechanical equipment in the home and its effective use.
159. **Farm Structures.** I. 3 Hrs. Fundamental principles of farm-building construction. Actual planning, laying out, and construction work during laboratory period.
170. **Rural Electrification.** I. 3 Hrs. Fundamentals of electricity and its application in the home and on the farm. Open to Agriculture students only, or instructor's permission to register.
252. **Advanced Farm Mechanics.** I. 3 Hrs. Forging, cold-iron work, tool-fitting, woodworking; offers training for teaching shopwork in rural high schools. PR: Agr. Engineering 2 or 152.
253. **Advanced Farm Machinery.** II. 3 Hrs. Trends and economic use of farm machinery. Primarily for graduate vocational agriculture teachers. PR: Agr. Engineering 153. Open to Agriculture students only or by instructor's permission.

255. **Care and Repair of Home Equipment.** II. 2 Hrs. For advanced and graduate students. Construction, maintenance, and repair of household equipment. Their comparative cost and economic use will be studied.

280, 281. **Special Topics.** I, II. 2 to 4 Hrs. per semester. Staff

The following courses are recommended for Agriculture students who wish to choose additional electives in Engineering.

M.E. 15. **Welding, Forming, and Heat Treatment.** I, II. 2 Hrs.
M.E. 11. **Machine Shop.** I, II. 2 Hrs.
M.E. 12. **Machine Shop.** I, II. 1 Hr.
M.E. 20. **Mechanical Drawing.** I, II. 3 Hrs.

Agronomy and Genetics

Professor POHLMAN; Associate Professors CARTLEDGE, TYNER, and VEATCH; Assistant Professor SCHALLER

AGRONOMY

Undergraduate Division

1. **Farm Crops.** I. 4 Hrs. Cereal, forage, and pasture crops. PR: Botany 2. Mr. Veatch

2, 102. **Soils.** II. 3 Hrs. The properties of soils. PR: Geology 4 and Chemistry 31. Mr. Pohlman and———

10. **Forest Soils.** I. 3 Hrs. Properties of soils in relation to forestry. PR: Geology 1 and Chemistry 2. Mr. Pohlman and———

124. **Climatology and Hydrology.** II. 3 Hrs. Mr. Galpin and Staff

200. **Advanced Crops.** II. 2 or 3 Hrs. Production, classification, and market grading with particular emphasis on forage crops. PR: Agronomy 1. Mr. Veatch

205. **Soil Conservation.** I. 2 Hrs. Causes of soil erosion and methods for its control. One or two half-day field trips will be made during the semester. PR: Agronomy 2 or 10. Mr. Tyner

210. **Fertilizers and Soil Fertility.** II. 3 Hrs. Soil fertility; theories and practices in use of fertilizer. PR: Agronomy 2. Mr. Pohlman

215. **Development and Classification of Soils.** I. 3 Hrs. Morphology, genesis and classification of soils. Soil survey methods, mapping of an assigned area, and characteristics of some important soil series of West Virginia and the United States. PR: Agronomy 2 or 10. Mr. Tyner

220. **Pasture Management.** II. 2 Hrs. Methods used in establishing and managing various types of permanent, rotation, and supplementary pastures. Mr. Schaller

230. **Soil Physics.** II. 3 Hrs. Physical properties of soils in relation to crop growth, water movement, and erosion control. Staff

280, 281. **Special Topics.** I, II. 2 to 4 Hrs. per semester. Staff

Graduate Division

316. **Soil Chemistry.** II. 3 Hrs. Fundamental chemical properties of soils in relation to plant growth; nature and properties of soil colloids; base exchange and soil acidity; availability of plant food elements and soil-plant interrelationships. Offered in 1947-48 and in alternate years. Mr. Tyner

350, 351. **Seminar.** I and II. 1 Hr. per semester. Recent literature pertaining to soils and crop production. Staff

380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester. Staff

BACTERIOLOGY

314. **Soil Microbiology.** II. 3 Hrs. Occurrence of micro-organisms in soils and their relationship to decomposition of organic matter, availability of plant nutrients, and soil acidity; technique of isolation and study. Offered in 1947-48 and in alternate years. Mr. Pohlman and Mr. Colmer

GENETICS

Undergraduate Division

II, III. **Elementary Genetics.** I, II. 2 Hrs. Elementary study of the principles of heredity. Mr. Cartledge

112. **Genetics Laboratory.** I, II. 1 Hr. Breeding experiments. Mr. Cartledge

220. **Crop Breeding.** II. 3 Hrs. Methods and basic scientific principles involved in the improvement of leading cereal and forage crops through hybridization and selection. PR: Genetics 111 or 221. Mr. Veatch

221. **Genetics.** I. .3 Hrs. Fundamental principles of inheritance. Mr. Cartledge

222. **Advanced Genetics.** II. 3 Hrs. PR: Genetics 221. Mr. Cartledge

250, 251. **Seminar.** I and II. 1 Hr. per semester. Recent literature pertaining to breeding, genetics, and cytology. Staff

280, 281. **Special Topics.** I and II. 2 to 3 Hrs. per semester. Staff

Graduate Division

332. **Biometry.** II. 3 Hrs. Statistical analysis of biological data. Offered in 1947-48 and alternate years. Mr._____

380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester. Staff

Animal Husbandry

Professors LIVESAY, RIETZ, SCHNEIDER, and WILSON; Associate Professors HYRE and CLARK; Assistant Professors BLACK and BLETNER

ANIMAL HUSBANDRY

Undergraduate Division

11. **Types, Breeds, and Market Classes of Livestock.*** I. 3 Hrs. Mr. Wilson

101. **Animal Nutrition.*** I. 3 Hrs. Digestion and metabolism of food nutrients, nutrient requirements of farm animals, and nutritive values of feeds and rations. PR: Chemistry 31. Mr. Schneider

104. **Animal Industry.** II. 4 Hrs. Importance of all classes of farm animals to land and food conservation. Three lectures and 1 laboratory. Mr. Livesay and Staff

138. **Livestock Grading and Selection.** II. 2 Hrs. Mr. Black

141. **Beef Production.** I. 3 Hrs. Mr. Livesay

142. **Pork Production.** II. 3 Hrs. Mr. Black

143. **Advanced Livestock Judging.** I. 2 Hrs. Students taking this course will be required to participate in a tour of inspection of representative flocks, herds, and studs. Staff

162. **Mutton and Wool Production.** II. 3 Hrs. Mr. Wilson

163. **Horse Production.** I or II. 2 Hrs. Emphasis on light-horse production, training, and use for pleasure. Mr. Livesay

166. **Meats** II. 2 Hrs. Lectures and demonstrations on the identification, selection, and nutritive value of meat cuts. Primarily for home economics students. Mr. Black

167. **Meats.** I. 2 Hrs. Farm butchering, curing, and care of meats. Visit to one of the large packing houses of Pittsburgh required of all students taking this course. Mr. Black

169. **Meat Judging.** I. 1 Hr. Mr. Black

203. **Advanced Animal Nutrition.** I. 3 Hrs. The chemistry of feeding stuffs and of the animal body, as well as of the digestion and metabolism of food nutrients. Mr. Schneider

222. **Breeding Farm Animals.** II. 3 Hrs. Physiology of reproduction; inheritance; selection, care, and management of breeding animals. PR: Genetics 111 or 221. Mr. Livesay

*Animal Husbandry 11 and 101 are prerequisite to all other courses in the department, including animal pathology courses.

223. **Advanced Livestock Production.** I. 3 Hrs. Mr. Livesay
224. **Advanced Livestock Production.** II. 3 Hrs. Mr. Wilson
235, 236. **Current Literature.** I and II. 1 Hr. per semester. Staff
280, 281. **Special Topics.** I, II, S. 2 or 3 Hrs. per semester. Advanced studies in various phases of animal husbandry or poultry husbandry; animal genetics; energy metabolism; protein metabolism; vitamin studies; parasitology. Staff

Graduate Division

351, 352. **Seminar.** I, II. 1 Hr. Animal and Dairy Husbandry Staffs
370. **Methods of Animal Husbandry Research.** I, II, S. 3 Hrs. A study of research methods which are being used in conducting experimental work in animal husbandry. Staff
380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester. Available to students in all divisions of Animal Husbandry. Staff

ANIMAL PATHOLOGY

102. **Animal Pathology.** II. 3 Hrs. PR: General Zoology. Mr. Rietz
106. **Animal Diseases and Parasite Control.** I. 3 Hrs. Two lectures and 1 laboratory. Mr. Rietz
206. **Parasites and Pathology.** I. 3 Hrs. PR: Invertebrate zoology; for non-agricultural students, consent of instructor. Mr. Rietz

POULTRY HUSBANDRY

1. **Poultry Production.** II. 4 Hrs. Prerequisite to all other poultry courses. Messrs. Hyre and Bletner
103. **Poultry Feeding and Management.** I. 3 Hrs. Factors in poultry production, feeding and management as related to scientific investigations. Mr. Bletner
105. **Poultry Judging.** I. 2 Hrs. Practice in selection of birds for both standard and production qualities. Mr. Hyre
112. **Incubating and Brooding Chicks.** II. 2 Hrs. Mr. Bletner
211. **Breeding and Selecting Chickens for Meat and Egg Production.** I. 2 Hrs. Mr. Hyre
213. **Turkey Production** I. 2 Hrs. Messrs. Clark and Bletner

Conservation

2. **Principles of Conservation.** II. No credit. Survey of conservation as a professional field; study of work to be done by the conservationist. Mr. Brooks and Staff
150. **Conservation Practices.** II. 3 Hrs. History of conservation development: study of conservation practices in the fields of soil, water, forests, and wildlife. Two lectures and 1 laboratory. Mr. Brooks and Staff

Dairy Husbandry

Professor HENDERSON; Associate Professor HYATT; Assistant Professors WEESE and ACKERMAN; Instructor TYLER

Undergraduate Division

12. **Farm Dairying.** II. 3 Hrs. Mr. Weese
102. **Ice Cream and Refrigeration.** II. 3 Hrs. Offered in 1948-49 and alternate years. Manufacture of ice cream; principles of refrigeration involved in the manufacture and storage of dairy products. Mr. Weese
103. **Market Milk.** I. 3 Hrs. Offered in 1947-48 and alternate years. Market

milk and the manufacture of dry and condensed milk. Mr. Weese

104. **Butter and Cheese.** II. 3 Hrs. Offered in 1947-48 and alternate years. Manufacture of butter and various types of cheese. Mr. Weese

107. **Milk and Public Health.** I. 2 or 3 Hrs. Mr. Henderson and Mr. Weese

111. **Dairy Production.** I. 3 Hrs. Mr. Henderson and Mr. Ackerman

123. **Dairy Judging.** II. 1 or 2 Hrs. Mr. Hyatt and Mr. Weese

204. **Dairy Technology.** II. 4 Hrs. Chemical and bacteriological methods used in the technical control of milk and milk products. Mr. Weese

221. **Dairy Cattle.** I. 3 Hrs. History of breeds and families of registered dairy cattle. Organization and activities of breed associations. Mr. Hyatt

222. **Milk Production.** II. 4 Hrs. Feeding and management of dairy cattle. Mr. Henderson

280, 281. **Special Topics.** I and II. 2 or 3 Hrs. per semester. Staff

Graduate Division

351, 352. **Seminar.** I, II. 1 Hr. Dairy and Animal Husbandry Staffs

380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester. Staff

BACTERIOLOGY

246. **Dairy Bacteriology.** II. 3 Hrs. See under "Bacteriology," page 104.

CHEMISTRY

218. **Dairy Chemistry.** I. 3 Hrs. See under "Chemistry," page 98.

Entomology

Professor PEAIRS

2, 102. **Entomology.** II. 4 Hrs. Biological, morphological, taxonomic, and economic phases of the study of insects. PR: Invertebrate zoology. Mr. Peairs

103. **Economic Entomology.** I. 2 Hrs. Standard practices in insect control; methods for study of injurious insects. Professional requirements in entomology. PR: Ent. 2 or equivalent. Mr. Peairs

152. **Forest Entomology.** I. 4 or 2 Hrs. Insects of importance to the forester; recognition and control of insect pests in the forest. Students who have credit for Entomology 2 (102) may receive only two hours' credit for this course. Mr. Peairs

201. **Survey of Applied Entomology.** I. 3 to 5 Hrs. Principles underlying the control of insects; cultural, biological, and chemical. Practice in biological and control investigations. Prerequisite for graduate credit: 20 hours in the field of biology. Not open to students who have credit in Ent. 102. Mr. Peairs

204, 205. **Taxonomy.** I, II, S. 2 or 3 Hrs. per semester. Studies in the families and genera of insects of the region; detailed studies in restricted groups for qualified students. Mr. Peairs

280, 281. **Special Topics.** I, II, S. 2 or 3 Hrs. per semester. Advanced studies in the field of interest of the student. The following are available: life history studies; response of insects to climatic variables; insect toxicology; injurious insects. Mr. Peairs

Graduate Division

370. **Methods of Entomological Research.** I, II. 3 Hrs. A study of methods which have been proposed and used for the solution of problems arising in the study of insect biology. Mr. Peairs

380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester. Staff

Horticulture

Professors MARSH and WESTOVER; Associate Professors SUDDS and CHILDS; Assistant Professor DYE; Instructors DOWNES and NEAL

Undergraduate Division

1. **Principles of Horticulture.** II. 4 Hrs. Vegetable production. Prerequisite to all courses in olericulture. Mr. Westover and Mr. Downes
102. **Principles of Horticulture.** I. 4 Hrs. Fruit production and ornamental horticulture. Prerequisite to all courses in pomology. Mr. Marsh and Mr. Childs
103. **Principles of Horticulture.** I. 3 Hrs. Staff
115. **Judging and Identification of Apple Varieties.** I. 1 Hr. Two laboratory periods first half of semester. Mr. Childs
139. **Landscape Gardening.** I. 3 Hrs. Theory and practice of landscape design with special application to home grounds. Mr. Dye
140. **Plant Materials.** II. 3 Hrs. Important woody and herbaceous plants used in landscape gardening. Mr. Neal
141. **Greenhouse Management.** II. 3 Hrs. Practical operation of temperatures, humidities, disease and insect control, and watering. Mr. Dye
206. **Small-Fruits Production.** II. 3 Hrs. A practical and scientific study of standard cultural practices in the small-fruit plantation. Mr. Childs
209. **Systematic Pomology.** I. 3 Hrs. History, botany, and classification of fruits. Offered in 1947-48 and alternate years. Mr. Marsh and Mr. Neal
212. **Commercial Tree-Fruit Production.** II. 3 Hrs. Latest methods in pruning, spraying, soil culture, and other production practices for fruit trees from the practical and scientific standpoint. Mr. Sudds
213. **Harvesting, Packing, and Storage of Fruits.** I. 3 Hrs. Instruction in maturity standards for harvesting, grading according to national and state standards, and planning and management of packing houses and storages. Mr. Marsh and Mr. Childs
232. **Commercial Vegetable Production.** II. 2 Hrs. Current methods of commerical vegetable crop production, including equipment, soil and climatic adaptation, plant raising, soil culture, harvesting, grading, and packing. Mr. Westover and Mr. Downes
233. **Systematic Olericulture.** I. 3 Hrs. History, botany, and classification of vegetable crops. Offered in 1948-49 and alternate years. Mr. Westover and Mr. Downes

280. 281. **Special Topics.** I and II. 2 or 3 Hrs. per semester. Staff

Graduate Division

380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester. Staff

Plant Pathology and Bacteriology

Professor LEACH; Associate Professors BARNETT, COLMER, and TAYLOR; Assistant Professors CLULO and VAUGHN

BACTERIOLOGY

Undergraduate Division

41, 141. **General Bacteriology.** I, II. 4 Hrs. (3 Hrs. for Engineering students). PR: Chemistry 1 and 2. Morphological and cultural characteristics of bacteria; interrelation with agriculture and industry. Mr. Colmer
241. **General Bacteriology.** I, II. 4 Hrs. PR: Chem. I and 2. Open only, with consent of instructor, to graduate students not majoring in the department. Not open to students having credit for Bacteriology 141. General survey; opportunity for study in field of student's interest. Mr. Colmer

246. **Dairy Bacteriology** II. 3 Hrs. The role of micro-organisms in market milk, in the manufacture of butter, cheese, and fermented milk, and in milk hygiene; practice in the preparation of media; making bacterial counts in milk, PR: Bacteriology 141. Offered in 1948-49 and alternate years. Mr. Colmer

248. **Bacteriological Water Analysis.** II. 2 Hrs. Standard bacteriological methods used in the routine examination of water and sewage. PR: Bacteriology 141. Offered in 1947-48 and alternate years. Mr. Colmer

280, 281. **Special Topics.** I and II. 2 to 3 Hrs. per semester. Mr. Colmer

Graduate Division

314. **Soil Microbiology.** II. 3 Hrs. Occurrence of micro-organisms in soils and their relationship to decomposition of organic matter, availability of plant nutrients, and soil acidity; technique of isolation and study. Offered in 1947-48 and alternate years. Mr. Colmer and Mr. Pohlman

380, 381, 382 383. **Research.** I, II. 1 to 6 Hrs. Mr. Colmer

BIOLOGY

Undergraduate Division

210. **Cytology.** I. 4 Hrs. The fundamentals of cell structure and inclusions in plants and animals with special attention to nuclear divisions. Miss Clulo

PLANT PATHOLOGY

Undergraduate Division

103. **Elementary Plant Pathology.** I. 4 Hrs. Nature and causes of plant diseases and methods of controlling them. Mr. Leach and Mr. Taylor

153. **Forest Pathology.** II. 4 Hrs. The important diseases of forest and shade trees; their causes and methods of control. PR: Botany 2. Mr. Leach and Miss Clulo

202. **General Plant Pathology.** II. 5 Hrs. Nature of diseases in plants, with practice in laboratory methods. PR: Bacteriology 141. Mr. Leach, Miss Clulo, and Staff

203. **Mycology.** I. 4 Hrs. Lectures, field and laboratory studies of the parasitic and saprophytic fungi. Mr. Barnett

206. **Diseases of Economic Plants.** SI. 4 Hrs. Mr. Barnett

280, 281. **Special Topics.** I, II. 2 to 4 Hrs. per semester. Staff

Graduate Division

312. **Pathological Anatomy.** I. 3 Hrs. A study of the abnormal tissue changes in plants. Offered in 1948-49 and alternate years. Miss Clulo

313. **Insect Transmission of Plant Diseases.** I. 3 Hrs. The role of insects in the spread and development of plant diseases and the relationship of insects to plant-disease control. PR: Plant Pathology 103 or Entomology 102. Offered in 1947-48 and alternate years. Mr. Leach

351, 352. **Seminar.** I, II. 1 Hr. Staff

380, 381, 382, 383. **Research.** I, II. 1 to 6 Hrs. Mr. Leach and Staff

Rural Organization

Professor PARSONS and Associate Professor HILL

118. **Organizations and Clubs for Farm Boys.** II. 2 Hrs. Problems involved in directing the activities of F. F. A., and similar organizations. Mr. Parsons or Mr. Hill

134. **Methods of Agricultural Extension.** I. 2 Hrs. Activities of the county agricultural and home demonstrtaion agents and of the agricultural

extension program of West Virginia. Offered in 1948-49 and alternate years. Mr. Parsons

*160. **Education—Materials and Methods of High-school Teaching of Vocational Agriculture.** I, II. 3 Hrs. Organization and Preparation for teaching vocational agriculture in the high school.
Mr. Parsons or Mr. Hill

*224. **Education.** Student Teaching in Vocational Agriculture. I, II. 4 Hrs.
Mr. Parsons or Mr. Hill

Education 277. Organizing and Directing Supervised Practice Programs in Vocational Agriculture. II. 2 Hrs. Planning programs of supervised practice, supervising, and evaluating such programs for all-day, part-time, and evening school students. Consent of instructor.
Mr. Parsons or Mr. Hill

Education 278. Planning the Long-time Programs and Organizing the Courses for Departments of Vocational Agriculture. I. 2 Hrs. For all-day, part-time and evening school students. Consent of instructor.
Mr. Parsons or Mr. Hill

280, 281. **Special Problems.** I, II. 2 to 3 Hrs. per semester. PR: adequate ability and training for the work proposed and permission to register.
Staff

380, 381. **Research.** I, and II. 1 to 6 Hrs. per semester. Staff

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THE DIVISION OF FORESTRY

The professional forester's work includes such diversified activities as timber production, logging, surveying, park management, forest protection, forest-stand improvement, flood control, watershed protection, soil-erosion control, submarginal land development, restoration of game, stream development, and construction of public camps and summer home sites. The wide scope of the modern field of forestry demands a thorough basic training for the professional forester. This accounts for the large number of required courses in the professional forestry curriculum If the forester wishes to specialize in any one branch of the field, graduate work is needed.

The course leading to the degree of Bachelor of Science in Forestry is designed to train the student for a professional forestry career in either public or private forestry work. Graduates should be equipped to hold positions with the U. S. Forest Service, with the Forestry Division of the U. S. Indian Service, with the Soil Conservation Service, with the National Park Service, and with other federal agencies employing professional foresters; with the various state forestry departments; and with those private forest land owners—both corporate and individual—who employ technical foresters.

The curriculum includes a two years' broad foundational study of the natural, mathematical, and social sciences basic to the field, followed in the junior and senior years by more detailed study of forestry principles and technique. Many of the courses in the curriculum provide for field laboratories enabling the student to see first-hand applications of the principles presented in the classroom and to experiment with the various techniques he is learning.

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*See the bulletin, **Requirements Applicable to Degrees and to Teacher Certification,** for additional requirements for certification to teach vocational agriculture.

An important part of the course is the ten weeks' forestry camp attended at the end of the sophomore year. At this camp the student is instructed in the field practice of land surveying and forest measurements and has opportunity to observe various forest operations on both public and private lands. Courses are offered also in game management and in other phases of the recreational use of public and private lands.

The Curriculum in Professional Forestry

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
Biol. 1	4	Biol. 2	4	Agron. 10	3	Bot. 32	2
Chem. 1	4	Chem. 2	4	Bot. 21	2	C. E. 6	2
Eng. 1	3	Eng. 2	3	C. E. 5	4	For. 4	3
For. 1	1	For. 2	1	Econ. 1	3	For. 11	3
Math. 2	3	Math. 10	3	For. 3	3	For. 21	4
Mil. Sci. 1	2	Mil. Sci. 2	2	Geol. 1	3	For. 170	1
Phys. educ.	1	Phys. educ.	1	Mil. Sci. 3	2	Mil. Sci. 4	2
	18		18		20		17

Forestry 100s—Junior Forestry Camp—10 Weeks—10 Hours

THIRD YEAR				FOURTH YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
For. 114	3	For. 112	4	Entom. 152	4	For. 122	3
For. 131	3	For. 113	3	For. 123	5	For. 133	3
For. 132	3	For. 125	3	For. 124	3	For. 141	3
For. 151	2	For. 142	2	For. 134	2	Pl. Path. 153	4
For. 171	1	For. 143	2	For. 135	3	Electives	3
Phys. 1 & 3	4	For. 172	1	For. 173	1		
		Electives	2				
	16		17		18		16

Summer Employment by Forest-using Agency

COURSES OF INSTRUCTION IN FORESTRY

Professors PERCIVAL and BESLEY; Associate Professors BROOKS, ERICKSON, and HOLSOE; Assistant Professors BYERS, DUGAN, and TRYON

1, 2. **The Profession of Forestry.** I and II. 1 Hr. per semester. Survey of the profession of forestry and of the opportunities available to trained men. Required of all freshmen in forestry. Mr. Percival

3. **Dendrology.** I. 3 Hrs. Classification, identification, and distribution of the timber trees of the United States. PR: Biol. 2. Mr. Core

4. **Dendrology.** II. 3 Hrs. Continuation of Forestry 3. Mr. Core

5. **Land Surveying.** I. 4 Hrs. Principles and techniques of land surveying, including boundary and topographic surveys, location of roads, and computation of areas PR: Math. 10. Mr. Baker

6. **Topographic Mapping.** II. 2 Hrs. Practice in lettering and drawing topographic maps from field data. Also mapping in the field with traverse-board outfits. PR: C. E. 5. Mr. Baker

7s. **Introduction to Forestry Field Practice.** S. 6 to 12 weeks. 6 to 12 Hrs. Field practice in elementary forest surveying and measurements. Commercial tree identification and measurement and sample-plot work. Arrange with instructor before registering. Mr. Besley and Staff

10. **Forest Soils.** I. 3 Hrs. Properties of soils in relation to forestry. PR: Geol. I and Chem. 2. Mr. Pohlman

11. **Silvics.** II. 3 Hrs. The forest and its environmental factors; site and type characteristics. PR: Agron. 10, Botany 21, and For. 4. Mr. Tryon

21. **Forest Mensuration.** II. 4 Hrs. Measurement of forest products, trees, and stands; timber estimating; introduction to growth and yield. PR: Civil Engineering 5. Mr. Byers

100s. **Forestry Camp.** S. Ten weeks. 10 Hrs. Field practice in land surveying, forest measurements, and tree identification; observation of forest types, forest improvements, and utilization practices. PR: Civil Engineering 6 and Forestry 4 and 21. Mr. Byers and Staff

112. **Silviculture.** II. 4 Hrs. Silvicultural systems used for obtaining natural reproduction; intermediate cuttings; treatment of various species in different types. PR: Forestry 11. Mr. Holsoe

113. **Silviculture.** II. 3 Hrs. Nursery practice; seeding and planting; all phases of artificial regeneration. PR: Forestry 11. Mr. Tryon

114. **Forest Economics.** I. 3 Hrs. The place of the forest industry in the national economy; forest resources of the United States; exports and imports of forest products; current movements within the wood-using industry as influenced by economic trends. PR: Econ. 1. Mr. Besley

122. **Forest Mensuration.** II. 3 Hrs .The measurement of growth and yield; statistical methods applied to forest measurement problems. PR: Forestry 21. Mr. Holsoe

123. **Forest Management.** I. 5 Hrs. Use of practical silvicultural methods on forest tracts; the regulation of the cut in order to obtain a sustained yield; the coordination of multiple uses of the same forest; the preparation of plans for the profitable management of specific forested areas. PR: Forestry 100s and 112. Mr. Besley

124. **Forest Finance.** I. 3 Hrs. Cost of producing and harvesting the forest crop. Wood production as a business enterprise. PR: Forestry 100s and 114. Mr. Besley

125. **Forest Policy and Administration.** II. 3 Hrs. Land policy in the United States; its historical, legal, and administrative development; the forester's relations with the public. Organization of public and private forest agencies. Mr. Percival

126. **Forest Measurements by Aerial Photographs.** II. 2 Hrs. Obtaining information on forest types and timber volumes from aerial photographs through use of stereoscope, parallax wedge, and other photogrammetric devices. PR: For. 11 and 21. Mr. Holsoe

131. **Wood Technology.** I. 3 Hrs. The structure and identification of the important woods of the United States; their physical properties and uses. PR: Forestry 4 (must be accompanied by For. 132). Mr. Erickson.

132. **Wood Technology.** I. 3 Hrs. Laboratory for Forestry 131. Mr. Erickson

133. **Lumbering.** II. 3 Hrs. Logging practices and lumber manufacture. Logging and mill equipment. Important factors affecting lumber grades. PR: Forestry 100s and 131. Mr. Byers

134. **Forest Products.** I. 2 Hrs. The production and uses of forest products other than lumber and timbers. PR: For. 131 and 132. Mr. Erickson

135. **Wood conditioning.** I. 3 Hrs. The purposes, effects, and methods of seasoning and preserving wood. PR: Forestry 131 and 132. Mr. Erickson

141. **Game Management.** II. 3 Hrs. Basic principles of handling wild life as a forest crop. (This course is not intended to train wild-life specialists). In recognition of the importance of fish, game animals, and fur-bearing animals in the forest, the course considers the problems of the maintenance of a maximum wild-life population. PR: Botany 32 and Biology 2. Mr. Dugan

142. **Recreational Developments.** II. 2 Hrs. Needs of the active and passive recreationist and means of supplying facilities for meeting these needs on public forests. PR: Civil Engineering 6, and For. 100s. Mr. Brooks

143. **The Forest Range.** II. 2 Hrs. A survey of basic range management technique and practices on forest lands, with consideration of range mapping and important forage plants. PR: Civil Engineering 6 and Forestry 100s. Mr. Brooks

144. **Forest Zoology.** II. 3 Hrs. The relationships of mammals, reptiles, amphibians, and fish to the forest, with emphasis on the ecology and taxonomy of these groups. PR: Biol. 2 or Zool. 2 or Zool. 3, Mr. Brooks

145. **Life History of Game Animals.** II. 3 Hrs. Field and laboratory studies of game-bird and game-mammal life histories, with special references to management of populations of these species. PR: Biol. 2 or Zool. 2 or Zool. 3. Mr. Dugan

151. **Forest Protection.** I 2 Hrs. Preventive actions. preparation activities, and control of forest fires as practiced on publicly-owned forests. Mr. Percival

152. **Forest Entomology.** I. 2 or 4 Hrs. Insects of importance to the forester; recognition and control of insect pests in the forest. Students who have credit for Entomology 2 (102) may receive only two hours' credit in this course. Mr. Peairs

153. **Forest Pathology.** II. 4 Hrs. The important diseases of forest and shade trees; their causes and methods of control. PR: Biology 2 and Forestry 131 and 132. Mr. Leach and Miss Clulo

170, 171, 172, 173. **Forestry Problems.** I, II. 1 Hr. per semester. (4 Hrs. maximum.) Mr. Brooks and Mr. Besley

177s. **Forestry Field Practice.** S. 6 to 14 weeks. No credit. A refresher field practice course in forest surveying, forest measurements, tree measurements, forest mapping, forest types, and forest management plan techniques. Arrange with instructor before registering. Mr. Besley and Staff

178s. **Wood Utilization Studies.** S. 6 to 14 weeks. No credit. Practical refresher course in wood technology, wood conditioning, and forest products. Arrange with instructor before registering. Mr. Erickson and Staff

180. **Farm Forestry.** II. 2 Hrs. Principles of forest management and their application to the establishment, care, and utilization of the farm woods. PR: Botany 2. Professional forestry students may not take this course for credit. Mr. Dugan

181. **Farm Game.** II. 2 Hrs. Fundamental principles of the natural propagation and management of game and other wild life on the farm, with emphasis on game as a farm crop. (Primarily for students in agriculture.) Professional forestry students may not take this course for credit. Mr. Dugan

182. **Hillculture.** II. 2 Hrs. Special crops for those areas where farms consist of forest land but where population pressure makes especially intensive silvicultural practices both feasible and necessary; development of hillculture stock; preparation of a hillculture farm plan; marketing requirements for hillculture crops. PR: Biol. 2 or Bot. 2; Agron. 2 or 10. Mr. Tryon

183. **Farm Woodlot Management.** II. 3 Hrs. Practical silvicultural methods; regulation of the cut in order to obtain continuous production; preparation of plans for profitable management. PR: For. 180. (No credit for professional forestry students.) Mr. Dugan

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THE DIVISION OF HOME ECONOMICS

Instruction in Home Economics

The Division of Home Economics occupies two floors in the north end of Oglebay Hall, where may be found offices, conference rooms, and a small departmental library, in addition to classrooms and laboratories well equipped

for the teaching of related arts, textiles and clothing, and foods and nutrition. Adjacent to the foods laboratories is a family-service unit consisting of a kitchen, dining room, and reception room. Additional laboratories are located outside Oglebay Hall but in close proximity, namely, the University Rural High School, the Home Management House, the Nursery School, and a Cafeteria.

The offerings in the division are designed to meet a wide variety of educational needs. One of the first aims is to help the student understand herself and her own potentialities and to encourage her to assume progressively more and more responsibility for her own development. In addition she will be given school and community laboratory experience, under guidance, to help her develop judgment in meeting situations, lead her to the belief that problems can be solved, and give her increasing confidence in her own ability to solve them.

To assist the student in setting goals and in planning experiences which will help her make progress toward these goals, a special advisory system has been set up. Each lower-division student has a faculty adviser and a student adviser. The student adviser helps her informally in adjusting to her new life as a college student. The faculty adviser counsels the student as to courses and assists in solving problems directly or indirectly affecting her progress in the university.

Plan of Work

The work of the first two years is largely cultural, including courses in written and spoken English, literature, and natural and social sciences. In addition, basic work in four areas—foods, clothing, art, and management—acquaints the student with the field of home economics. Special courses have been arranged for the student who wishes to stay in college only two years and whose main interest is to prepare for homemaking. She may substitute homemaking courses for those in the basic sciences during the first two years. During the last two years the student is given the opportunity of specialization in one of several vocations.

Vocations for Home Economists

West Virginia graduates are now teaching homemaking at junior high school, senior high school, and college levels; others are supervising the teaching of homemaking. Some may be found serving as home-demonstration agents, girls' club leaders, or commercial demonstrators. A considerable number are engaged in institutional work as hospital dietitians or as managers of tea rooms, cafeterias, or college dining halls. Others are engaged in scientific research or in allied work as laboratory technicians.

Social service, through either private or government agencies, has claimed the interest of a number. Nursery schools have turned to West Virginia home-economics graduates for supervisors. Department stores have offered a variety of interesting jobs in selling, counselling, interior decoration, and other phases of retailing. One or two graduates with a flair for writing have found work on women's magazines. New fields are constantly opening up, so that the person trained in home economics has an ever-widening choice of vocations.

The division endeavors to keep in touch with the various agencies which employ home-economics graduates and to assist graduates in finding employment.

The Baccalaureate Degree in Home Economics

The Division of Home Economics offers courses leading to the granting of a B. S. and an A. B. degree in home economics.

The degree of Bachelor of Science in Home Economics will be conferred upon any student who satisfies the entrance requirements and offers 128 hours of college credit including the courses listed below. The student must receive at least as many honor points as credits in order to be eligible for graduation.*

REQUIREMENTS FOR ALL STUDENTS WORKING TOWARD A B. S. H. E. DEGREE

General: Engl. rhetoric, literature, speech (no more than 3 hrs. in latter), 12 hrs.; chemistry 8 hrs.; history, psychology, economics, and sociology, 9 hrs. (with some work in at least two fields); biological science, 8 hrs. (including bacteriology); physical education, 4 hrs. (Humanities 1 may be substituted for 4 hrs. modern European history; Humanities 2 may be substituted for 4 hrs. English literature.) Total, 41 hrs.

Home Economics: foods and nutrition, 6 hrs.; management, 5 hrs.; textiles and clothing, 5 hrs.; applied art, 4 hrs.; child development, 2 hrs.; electives in home economics, 18 hrs. Total, 40 hrs. General electives, 47 hrs. Grand total, 128 hrs.

Sufficient electives are allowed to permit the student to satisfy the requirement for a first-class high school certificate to teach in West Virginia or to fulfill the preparatory requirements for apprenticeship, internship, or similar vocational experiences in a variety of fields including those of institution management, hospital dietetics, food and textile research, retailing, extension work, and other governmental services.

It is suggsted that students carry a maximum of 15 hours while in the Home Management House or while doing Student Teaching.

A student who is working for room and board may not carry more than 14 hours until she has demonstrated that she is able to maintain an average of 1.2 or better while working.

THE A. B. DEGREE WITH MAJOR IN HOME ECONOMICS

Students who wish to offer home economics as a major in the College of Arts and Sciences are referred to the information concerning an A. B. degree with a major in home economics. (See page 159.)

ELECTIVES FOR STUDENTS OUTSIDE THE DIVISION

Students in other colleges wishing to elect courses in home economics will find a number of courses available. The following courses are suggested: Home Economics 1, 2, 3, 4, 13, 14, 18, 33, 50, 116, 117, 134, 138, and 190.

*For a complete description of the honor-point system see page 56.

CLASSIFICATION OF STUDENTS

To be classified as a conditional freshman a student must have credit for at least 15 units of entrance requirements; to be classified as a regular freshman she must have fulfilled all entrance requirements. To be classified as a sophomore she must have credit for 25 hours of college work; as a junior, 58 hours; as a senior, 92 hours.

The Suggested Curriculum for the First Two Years

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	English 3, 4,		Speech 3,	
Chem. 1*	4	Chem. 2	4	or 5	3	6, or 11	3
(or)		History 2	3	*(or)*		Physiology 51	4
History 1	3	*(or)*		Humanities 2	4	Home Ec. 33	2
(or)		Humanities 1	4	Home Ec. 13	4	Home Ec. 50	2
Humanities 1	4	Home Ec. 2	2	Home Ec. 18	3	Phys. educ.	1
Home Ec. 1	2	Home Ec. 3	2	Biology 1	4	Econ. or sociol.	3
Home Ec. 4	2	Phys. educ.	1	Econ. or sociol.	3		
Phys. educ.†	1			Phys. educ.	1		

*Prospective dietitians should elect Chemistry 1 and 2.
†Students must elect 4 courses—one from each group: Athletics 9 or 10; Dancing 2, 3, 4, or 15; Individual Activity 6, 7, 8, or 57; and Swimming 1 or 16.

The Suggested Curriculum for Those Who Expect to Terminate Work at End of Two Years

FIRST YEAR				SECOND YEAR			
First Sem.	***Hrs.***	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	Eng. 3, 4, or 5	3-4	Speech 3,	
History 1	3	History 2	3	*(or)*		6, or 11	3
(or)		Home Ec. 3	3	Humanities 2	4	Home Ec. 33	2
Humanities 1	4	Home Ec. 2	2	Home Ec. 13	4	Home Ec. 50	2
Home Ec. 1	2	Phys. educ.	1	Home Ec. 18	3	Phys. educ.	1
Home Ec. 4	2			Phys. educ.	1	Physiology 51	4
Phys. educ.	1			Econ. or sociol. or psychology	3		
	11 or 12		11 or 12		15 or 16		12
Electives	4 to 6	Electives	4 to 6	Electives	1 to 3	Electives	4 to 6

SUGGESTED ELECTIVES

Freshmen: Music 77 (2 hrs.), Art 12 (3), language (3); Psychology 1 (3).
Sophomores: Home Econ. 105 (2 Hrs.), 117 (2), 180 (2), 14 (3).

The Curriculum for Teachers

Students who wish to obtain a high-school certificate to teach home economics must meet the requirements of the State Board of Education and of the College of Education. Recommendation for certification is made by the division of home economics to the Dean of the College of Education. For requirements see the bulletin, **Regulations Governing Teacher Selections, etc.**

The head of the Division of Home Economics in the College of Agriculture, Forestry, and Home Economics is also a member of the College of Education and is the adviser for students wishing to meet the requirements for a high-school certificate to teach home economics.

West Virginia University has been approved by the State Department of Education and by the U. S. Office of Education as qualified to train teachers of vocational homemaking.

All students who meet the requirements for vocational certificates in home economics as set forth in the bulletin, **Regulations Governing Teacher Selection, Guidance, Training, and Certification,** and who maintain an average of "C" or better in Education 163 and 224 will be recommended for vocational certificates.

Students transferring from other institutions should do so not later than the junior year. A minimum residence of the entire senior year is required, and students with irregular schedules will require a longer time.

Major Curricula in Home Economics

THE TEACHING MAJOR

(See Teacher Training Bulletin for course requirements)

RESEARCH IN FOODS AND NUTRITION

Recommended: English 13 (2 hrs.); English 126 (2 or 3); Phys 1 and 3 (4); Physics 2 and 4 (4); Physiol. 51 (4); Chem. 31 (4); Chem. 105 (4); Chem. 106 or 115 (3); Biochem. 239 (4); Math. 3 (4); Math. 4 (2); Math. 5 (4); Math. 107 (4); H. Ec. 107 (3); H. Ec. 218 (2); H. Ec. 251 (2); H. Ec. 252 (3).

TEXTILES AND RETAILING

Recommended: Sociol. 1 (3 hrs.); Econ. 173 (3); Phys. 1 and 3 (4); H. Ec. 134 or 135 (3 or 4); H. Ec. 225 (2); H. Ec. 226 (2); H. Ec. 230 (2); Chem. 5 or 105 (4); Chem. 6 or 106 (3-5); Chem. 31 or 131 (4); Educ. 221 (2); Art 111 (3); Psych. 132 (3); English 126 (2-3). Selected courses in business administration.

NUTRITION AND DIETETICS

Required: Chem. 31 (4 hrs); Biochem. 239 (4); Physiol. 51 (4); H. Ec. 14 (3); H. Ec. 107 (3); H. Ec. 108 (2-4); H. Ec. 111 (2); H. Ec. 217 (2); **Recommended:** Chem. 105 (4); Chem. 106 or 115 (3); H. Ec. 109 (2); H. Ec. 110 (2); H. Ec 113 (3); H. Ec. 218 (2); Econ. 173 (3). (Refer to current A. D. A. requirements.)

DESIGN

Required: H. Ec. 117 (2 hrs.); H. Ec. 135 (4); H. Ec. 138 (2); H. Ec. 226 (2); H. Ec. 230 (2); Psych. 132 (3). **Recommended:** H. Ec. 136 (2); H. Ec. 173 (3); H. Ec. 225 (2); Art 11 or 111 (3); Sociol. 105 (3); Econ. 127 (2); Bus. Adm. 128 (3); Physics 1 and 3 (4).

EXTENSION, HOME SERVICE, AND COMMERCIAL WORK

Required: H. Ec. 33 (2 hrs.); H. Ec. 107 (3); H. Ec. 108 (2-4); H. Ec. 120 (2); H. Ec. 240 (2); H. Ec. 252 (3); H. Ec. 254 (3); Econ. 173 (3). **Suggested electives:** Speech 11 (3); Speech 120 (3); H. Ec. 50 (2); H. Ec. 190 (2); H. Ec. 251 (2); Psych. 1 or 3 (3); Pol. Sci. 5 (3); Jour. 112 (2); Mus. 77 (2); Sociol. 3 or 130 (3); Sociol. 105 (3); Educ. 106 (3); Physics 1 and 3 (4). Selected courses in agriculture.

CHILD DEVELOPMENT

Required: H. Ec. 50 (2 hrs.); H. Ec. 107 (3); H. Ec. 215 (2); H. Ec. 240 (2); H. Ec. 241 (2); Psych 1 (3); Psych 122 (3); Psych 234 (3); Libr. Sci. 103 (3); Sociol. 210 (3); **Recommended:** Psych. 224 (3); Speech 250 (3) and 200 (3); Mus. 77 (1).

COURSES OF INSTRUCTION IN HOME ECONOMICS

Professor NOER; Emeritus Professors COLWELL and NESBITT; Assistant Professors BROWN, DIETRICH, PALMER, PARIS, PRICE, and WHARTON; Instructors BOGGESS, HARTSON, MCALLISTER, PALMER, and WELLEN

(1) Students in the College of Ats and Sciences who major in home economics must meet the requirements in that college and also the departmental requirements as outlined on page 159.

(2) Students who wish to obtain the high-school certificate to teach home economics must meet the requirements of the State Board of Education, the College of Education, and the Division of Home Economics. The B. S. H. E. degree in the College of Agriculture, Forestry, and Home Economics is planned to allow sufficient elective to meet these requirements.

(3) Students from other colleges who wish to elect home economics courses without meeting the Science requirements may take Home Economics 1, 2, 3, 4, 33, 50, 115, 116, 120, 134 or 135, 138, 240, and 241; others by consent of instructor.

Food and Nutrition

Instructors MCALLISTER, PALMER, and WELLEN

1. **Elementary Foods and Nutrition.** I, II. 2 Hrs. Application of principles of human nutrition with particular reference to need of college students. Open to all students. Mrs. Palmer

13. **Food Selection and Preparation.** I, II. 4 Hrs. Two lectures and two laboratories. PR: Chem. 1 and H. E. 1, or consent of instructor. Chemical and physical bases for food preparation with enough experimental work to give an understanding of the reasons for recommended procedures for the preparation of food products of high quality. Demonstrations, discussions, and workshop. Miss McAllister

14. **Meal Planning, Preparation, and Service.** I, II. 3 Hrs. One lecture and one 3-hr. laboratory. PR:H. E. 1 and 13, or consent of instructor. Problems in selection and purchase of foods and the planning, preparing, and serving of meals, including wise use of time and energy. Miss McAllister and Miss Nesbitt

105. **Food Preservation.** I. 2 Hrs. One lecture and one laboratory. PR: H. E. 13 or equivalent. PR or parallel: Bact. 141. Fundamental principles involved in preservation of foods by canning, drying, fermentation, curing, and freezing as applied in the home and in centers equipped for quantity work. Miss McAllister

107. **Nutrition.** I. 3 Hrs. Two lectures and one laboratory. PR: Chem. 2, H. E. 13, and Physiol. 51 or 151, or consent of instructor. Food needs as affected by such factors as age, sex, and activity, nutritive value of common foods, and planning of adequate diets at different cost levels. Mrs. Palmer

113. **Experimental Cookery.** I. 3 Hrs. Two laboratories of 3 hours each. PR: H. E. 14, Chem. 31. Utensils, ingredients, temperature, manipulation, and cooking methods as they affect quality of cooked products. Offered in alternate years. Miss McAllister

114. **Group Feeding.** I, II. 1 Hr. (Arr.) PR: H. E. 13. Mrs. Wellen

161. **Requirements for Normal Human Nutrition.** I, II. 3 Hrs. Lecture and demonstration. Two 2-hour and one 1-hour class per week. For students in other colleges who are interested in nutrition. Staff

215. **Nutrition Work with Children.** II. 2 Hrs. PR: H. E. 13. 14, 107. One lecture, one laboratory. Malnutrition among children of elementary-school age. Causes, prevention, and treatment. Planning and preparing luncheons for a group of children; weighing; measuring; checking food habits and making home visits. Staff

216. **Community Nutrition Problems.** II. 2 Hrs. Two hours of lecture, plus field work. PR: H. E. 13, 14, 107, 215, or consent of instructor. Includes organizations and agencies through which these problems may be solved. Staff

217. **Diet in Disease.** II. 2 Hrs. PR: H. E. 14, 107. Adaptations of the normal diet for diseases whose prevention or treatment is largely influenced by diet. Offered in alternate yars. Staff

218. **Advanced Nutrition.** I. 2 Hrs. Topics discussed will depend somewhat upon needs and interests of students participating. Critical review of current literature and of present researches. PR: physiology (3 hrs.), H. E. 107, or equivalent background. Offered in alternate years. Staff

Institution Management

Assistant Professor PRICE

108. **Quantity Cookery.** I and II. 2-4 Hrs. Application of principles of cookery to preparation of food in large quantity. Use of standardized formulas, calculation of costs, and use of institutional equipment. The Cafeteria is used as laboratory.

109. **Institution Accounting.** 2 Hrs. Current procedures in accounting for institutions. Preparation of budgets, food--control records, financial statements, and reports.

110. **Institution Buying.** 2 Hrs. Quantity-food purchasing for institutions. Observation in local wholesale markets and warehouses.

111. **Institution Organization and Management.** 2 Hrs. Principles of organization and management of institutions of various types. PR: H. E. 108.

112. **Laboratory Practice In Institution Management.** I, II. 2 Hrs. PR: H. E. 14 and consent of instructor. (Arranged.) Experience under supervision in planning, preparing, and serving food in an institution. Selection of place and type of experience to be determined by needs of students. PR: H. E. 108 and 111.

Textiles and Clothing

Assistant Professor DIETRICH

2. **Elementary Clothing.** I, II. 2 Hrs. Problems in selection, purchase, construction, and conservation of clothing.

18. **Intermediate Clothing.** 3 Hrs. Two 3-hr. laboratories. Clothing needs of the family; buying and alteration of ready-made garments. Experience in construction with particular emphasis on pattern adaptation and remodeling.

115. **Clothing Selection.** I, II. 2 Hrs. Two lectures. Selection of clothing for the whole family from the point of view of design, color, and economy. Clothing inventories and buying plans. PR: H. E. 3, H. E. 2, or consent of instructor.

116. **Clothing Techniques.** II. 2 Hrs. Not open to home economics majors. Techniques for simple garment construction, remodeling, alteration, and repair. Problems adapted to needs of individual students. Especially planned for Arts students and young homemakers.

117. **Textiles.** I, II. 2 Hrs. Lecture and laboratory combined. Textile fibers and fabrics studied with a view to their use in dress and in the home. PR: H. E. 2 and 3 or consent of instructor.

120. **Selection and Construction of Clothing.** I, II. 2 Hrs. Two laboratories. Construction of wool and rayon garments. Pattern alteration and adaptation. Making over clothing. PR: H. E. 3, H. E. 2, or consent of instructor.

225. **Advanced Clothing Construction.** II. 2 Hrs. Two 2-hr.. laboratories. Tailoring, draping on the dress form, coat making, and special finishes. PR: H. E. 18, 115, 117, 120, or consent of instructor.

226. **Advanced Textiles.** II. 2 Hrs. Two 2-hour periods which combine lecture and laboratory. Major textile fibers, and alternates among the lesser-used fibers. Commercial laundry and cleaning establishment. Fur fibers. PR: H. E. 117, chemistry, and Econ. 1 or 173, or their equivalent.

Applied Arts

Assistant Professor PALMER; Instructor WELLEN

3. **Art Applied to Personal Problems.** I, II. 2 Hrs. Study of principles of design intended to help college students meet the problems of daily living. Problems may include room arrangement, clothing design, etc. Miss Palmer

33. **Present-day Housing.** II. 2 Hrs. PR: H. E. 3 or consent of instructor. Factors to be considered in solution of problems of providing housing for the family. Special attention to low-cost living. Planning for the home, cost of furnishing, and maintenance. Laboratory practice in making improvement for rooms, apartments, and housing, using materials commonly found in rural communities and small towns. Miss Palmer

134. **House Decoration.** II. 3 Hrs. for non-majors. One lecture and 2 laboratories. Materials and furnishings that go into decoration of a home, with emphasis on cost. buying, reconditioning, and furnishing. Miss Palmer

135. **Home Planning and Furnishing.** I, II. 4 Hrs. Two lectures and two laboratories. Fundamentals of planning arranged to develop better understanding of house structure and home needs. Discussions on home decorating based on various income levels and suited to various communities and needs. PR: H. E. 3. Miss Palmer

136. **Advanced Home Planning and Furnishing.** II. 2 Hrs. Two laboratories. PR: H. E. 3 and 33 or 135 or consent of instructor. Miss Palmer

138. **Home Crafts.** I, II. 2 Hrs. Two laboratories. Knitting, crocheting, decorative stitchery, leather-tooling, glove-making, children's toys, weaving. Miss Palmer

230. **Costume Design.** I. 2 Hrs. Two laboratories. Techniques of figure and fashion drawing. Problems in designing costumes and ensembles for the individual and other members of the family. Study of historic costume as it affects present-day fashions. PR: H. E. 3, 18, 117, and 120, or consent of instructor. Mrs. Welien

Health and Child Care

Instructor HARTSON

240. **Child Development.** I, II. 2 Hrs. Two lectures. Study of the child from prenatal period through adolescence. The University Nursery School is used for observing pre-school children—each girl spends 1 or 2 hours a week observing and assisting.

241. **Observation and Participation in Nursery School.** I, II. 1-2 Hrs.

Home Management

Assistant Professor PARIS, Instructor WELLEN, and STAFF

4. **Management.** I, II. 2 Hrs. Simple problems in the management of time, energy, and other resources. Practical application to problems of individual members of class. Miss Paris and Mrs. Wellen

251. **Mechanics of the House.** I, II. 2 Hrs. Two lectures. Work areas of the house. Kitchen planning and efficiency. Standards in selection of equipment for cleaning and for the kitchen and laundry as they apply to machines, heat, refrigeration, and electricity. Care of equipment. PR: 25 hrs. of home economics or consent of instructor. Staff

252. **Home Management Laboratory.** I, II. 3 Hrs. Arranged. Emphasis on satisfying family life and social relationships. Approximately 5 weeks of house residence, and 1 hour of discussion each week throughout the semester. PR: 25 to 30 Hrs. of home economics. Miss Paris

254. **Home Management (Economic Problems of the Home).** I, II. 3 Hrs. Three lectures. Economic problems of the American family. Standards of living, budgeting and account keeping, buying problems. Value of household production. Providing for the future. PR: 33, 4, and 13. Miss Paris

Home Economics Education

Professor NOER; Assistant Professor BROWN; Instructor BOGGESS

Ed. 163. **Materials and Methods in Home Economics.** I, II. 2 Hrs. Miss Boggess

Ed. 262. **Vocational Home Economics in Secondary Schools.** I, II. 2 Hrs. Miss Noer

(For additional courses, see Summer Session Bulletin)

General Courses

Professor NOER and STAFF

50. **Management in Family Living.** II. 2 Hrs. PR: H. E. 4 or consent of instructor. Influence of home conditions on families and family members. In considering ways of meeting every-day problems of families, an attempt will be made to apply the findings of science and the techniques of management in such a way as to help one achieve satisfaction in living. Mrs. Wellen

160. **Problems in Home Management and Family Living.** I, II. 2 to 4 Hrs. A general course dealing with various phases of family life and home management. Open to juniors and seniors not majoring in home economics. Mrs. Palmer

180. **Problems in Home Economics.** I and II. 1 to 4 Hrs. Staff

190. **Home Nursing.** II. 2 Hrs. Mrs. Palmer

270. **History of Home Economics.** I, II. 1 Hr. One lecture. Miss Noer

280. **Problems in Home Economics.** I and II. 1 to 4 Hrs. Staff

The College of Arts and Sciences

ORGANIZATION

The University, through its liberal arts college, offers that academic training which is so essential today as a foundation for good citizenship, enlightened leadership, and effective professional or technical training. It puts thoroughness above breadth of offerings. It provides a curriculum rigid enough to conserve the best in the cultural subjects, yet elastic enough to meet the varying talents and aptitudes of individual students.

Present-day standards in business, industry, and the professions are becoming more and more exacting. Increasing emphasis is being placed upon a liberal education as a foundation for technical or professional work. As a consequence, the paths to the professions lead through this college. Preprofessional curricula have been arranged in law (three years), education (two years), medicine (two, three, or four years), dentistry (two, three, or four years), nursing, social work, journalism, and medical technology.

The College of Arts and Sciences includes a lower division and an upper division. The lower division consists of the work of the first and second years, and the upper division consists of the work of the third and fourth years.

The instruction in the College of Arts and Sciences is administered through the following departments:

Art; biology; chemistry; classics; economics and business administration; English language and literature; geology, mineralogy, and geography; Germanic languages and literatures; history; home economics; library science; mathematics; philosophy and psychology; physics; political science; Romance languages and literatures; sociology; social work; and speech.

Two baccalaureate degrees are granted in this College: Bachelor of Arts (A.B.) and Bachelor of Science (B.S.) The Bachelor of Arts degree is conferred upon those who pursue the four years of academic work in the College or upon those who pursue three years of work in this College and one year in either the College of Law or the School of Medicine.[1]

The Bachelor of Science degree is conferred upon those who pursue the combined scientific and medical courses, or special curricula in chemistry, in geology, in business administration, or in social work.[1]

Standing Committees

SCHOLARSHIP: Messrs. WINTER (*chairman*), HARRIS, FORD, SPIKER, and SMITH (*secretary*).

INSTRUCTIONAL POLICIES AND PRACTICES: Messrs. SHORTRIDGE (*chairman*), CROCKER, TAYLOR, FRASURE, MORRIS, TOWER, ASHBURN, and COLLETT; Miss TURNER.

CURRICULUM COMMITTEE ON GENERAL EDUCATION: Messrs. CROCKER (*chairman*), CURTIS, LAZZELL, SPIKER, STRAUSBAUGH, and VEST; MISS TURNER.

CURRICULUM COMMITTEE ON VETERANS' EDUCATION: Messrs. ASHBURN (*chairman*), CURTIS, LAZZELL, WHERRY, CORE, DAVIS, and CROCKER.

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[1]See page 58, "Classification of Students."

Main Objectives

The curriculum of the College of Arts and Sciences has certain main objectives.

1. **General Culture.** The work of the lower division is intended to complete what is usually termed "a general education." It rounds out the program of studies pursued in the high school and promotes the full development of the student (1) as an individual and (2) as a member of society. Ideally, the student should undergo a well-proportioned development intellectually, spiritually, physically, and emotionally. The end of such development should be an inner balance or stability on the basis of which further growth can take place. The development of the individual as a member of society is to be measured in terms of his or her usefulness and sense of responsibility to the social order. The student should develop the capacity for intellectual participation as a citizen in the community, the state, the country, and the world. A general education should, therefore, provide for all students a meaningful experience appropriate to the individual and social needs which all citizens have in common as members of a free society in the contemporary world.

2. **Specific attributes.** Most of the attributes of a general education can be placed in one of three categories: (1) attitudes, (2) areas of knowledge, and (3) skills.

The following attitudes should be attained as the result of a general education:

(1) An attitude of tolerance or open-mindedness, characterized by a cosmopolitan outlook that will enable the student to see beyond the limits of his own profession, his own economic status, and his own country;

(2) An attitude of truth-seeking characterized by scientific objectivity and motivated by intellectual curiosity;

(3) An attitude of intelligent appreciation towards nature and the arts that will, as far as the student's endowments will permit, help him in his aesthetic and ethical choices;

(4) An attitude of dispassionate self-appraisal, based on an understanding of his own nature and characterized by an awareness of his own mental strengths and weaknesses.

The areas of knowledge which should be the common possession of educated persons may be conveniently grouped in two divisions:

(1) A knowledge of man as a social and intellectual being, of his place in contemporary civilization, and of that civilization's place in the history of man;

(2) A knowledge of man as an organism and of man in his relation, direct or indirect, to the biological and physical environment in which he lives.

Three basic skills are regarded as indispensable to all educated persons:

(1) That of self-expression or communication, involving writing, speaking, reading, and listening;

(2) That of calculation, i. e., a knowledge of, and some skill in, basic mathematics.

(3) A familiarity with at least one foreign language, not only as a useful skill, but also as a means of promoting tolerance and sympathetic understanding of peoples who do not speak our language.

Courses Recommended

Two types of courses are recommended to all students in the lower division as common means for fostering the attributes of mind and character which a general education should develop in the student:

(1) Courses for the promotion of basic skills: (a) calculation and (b) communication;

(2) General introductory courses for the elementary but organically integrated study of four fields of human knowledge: (a) Biological Science, (b) Social Science, (c) Physical Science, and (d) Humanities.

Opportunity for Specialization

The work of the upper division is intended to provide intensive study in one or two fields of knowledge. It is based on the belief that an educated man or woman should not only know the fundamentals of several branches of study but should have a rather thorough knowledge of some selected field. In the upper disivion, therefore, the student concentrates on a major and one or two minors. The curriculum is sufficiently flexible, however, to meet the needs and tastes of individual students without at the same time exposing the student to the disadvantages of a free elective system.

Special Provisions for the Junior Certificate

Experience has shown that students whose average in high-school subjects was below 75 percent, or students who ranked in the lowest one-fourth of the high-school graduating class, probably will not succeed in the regular college curriculum. Nevertheless, such students may, by wise selection of studies, profitably spend one or two years in college. Other students for financial or other reasons may not be able to attend college for more than one or two years. It is believed that students in either group may spend their time more profitably taking courses in which they are particularly interested from a cultural or vocational point of view than by following the curriculum leading to the A. B. degree. Students who are not candidates for the A. B. degree but who earn 64 hours of college credit and 64 honor points, including general University requirements, in residence in this college will be awarded the Junior Certificate of the College of Arts and Sciences.

Advisers

Lower Division. Each student in the lower division is assigned to an adviser who will assist in registration and who will have general supervision over the work of the student. Electives are chosen and changes in the program are made with the approval of the adviser. Students are urged to confer with advisers in respect to any difficulties or mal-adjustments in college life.

Upper Division. Each student in the upper division is assigned to an adviser of the department to which the major subject belongs. The program of study and all changes in class assignments must be approved by the adviser.

The Major Subject

In the upper division the student concentrates on a major and one or two minor subjects selected from the following list of subjects:

Art	French	Physics
Biology	Geology	Political Science
Botany	German	Psychology
Chemistry	History	Social Work
Classics	Home Economics	Sociology
Economics	Library Science	Spanish
Business	Mathematics	Speech
English	Philosophy	Zoology

REQUIREMENTS FOR DEGREES

General Requirements for All Degrees

Foreign Language. Fewer than 6 hours in an ancient or modern language will not be counted towards any degree, diploma, or certificate in this College unless work in the same language has been offered for entrance.

Electives. At least 6 hours must be taken in each subject as an elective, but no more than 9 hours in isolated courses of less than 6 hours each, selected with the approval of the adviser, may be offered.

In addition to the regular elective work in the College of Arts and Sciences which is offered by the faculties in other colleges, work not to exceed 15 hours in the College of Law, the College of Agriculture,[1] the College of Engineering and the School of Mines,[2] the School of Music,[3] the School of Physical Education and Athletics,[4] the School of Journalism, or 12 hours of upper-division work in Military Science and Tactics, or 20 hours in the College of

[1]In addition to the 15 hours, the following courses in agriculture are regular electives in the College of Arts and Sciences: Farm Economics 131 and all courses in entomology, genetics, and plant pathology. (See the special curriculum for the A. B. and B. S. in Agriculture.)

[2]The engineering and mining electives include Chemical Engineering 101, 202, 205, 206, 210, 220, and 221; Civil Engineering 1, 2, 3, 110, and 115; Electrical Engineering 100, 102, 103; Mechanical Engineering 20, 24, 26, 29, 221, and 222; Mechanics 101, 102, 103, and 104; and Mining Engineering 106, 202, 203, and 204. In addition the student may elect with the consent of his adviser, when his major is Physics, Mechanical Engineering 101 to 107 (10 hrs.); and Ch. E. 100s and 235s (4 hrs.).

[3]The music electives include Theory of Music 1, 2, 3, 4, 72, 79, 109 to 118, 180 to 183, 240, 241, and 281; Ensemble 153 to 156; classes in orchestra instruments 191 to 196; Men's Glee Club, Women's Glee Club, and University and Community Orchestra; and piano or voice or violin or pipe organ or band and orchestra instruments.

[4]The electives in physical education are: P. E. 77, 151, 167, 277, and Safety Education 281.

Education, may be included in the list of elective credits offered by students in the College of Arts and Sciences. The total number of hours elected from other colleges shall not, however, exceed 24 hours in all.

The course in general biochemestry is available (without additional fees) in the School of Medicine.

Major Subject. The maximum amount of credit allowed in any one department is ordinarily 40 hours. Exceptional cases involving extension of hours in the major must have the previous approval of the Scholarship Committee.

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE

The Bachelor of Arts degree in the College of Arts and Sciences is conferred upon any student who complies with the general regulations of the University concerning degrees, satisfies all entrance, college, and departmental requirements, and completes any one of the following courses of study:

A. Regular course (128 hours)
B. Pre-Medical course (128 hours)
C. Combined courses:
   (a) Arts and Law (124 hours)
   (b) Arts and Medicine (128 hours)

Students transferring to West Virginia University from other institutions should ordinarily do so not later than the beginning of the third year. Such students must meet all the requirements of the lower division. All deficiencies must be met as soon as possible after admission to this College, whereupon such student may register regularly in the upper division.

Maximum and Minimum Work. A student who has made an average the preceding semester of "B" or better while carrying at least 16 hours may enroll for a maximum of 19 hours without petitioning the Scholarship Committee. A student who has made an average in the preceding semester of "C" or better while carrying at least 16 hours may without petitioning enroll for a maximum of 18 hours, 36 hours for the year, provided that no more than 34 hours are academic work.

Note

In the following departmental curricula the number of the course is indicated in bold face type. The figure in the parentheses immediately following refers to the value in semester credit hours offered for the course.

A. Regular Course (128 Hours)

Four Years in the College of Arts and Sciences

Lower-division Curriculum

(a) **General University Requirements.**
Military science[1]—6 hours.
Physical education (men)[2]—2 hours.
Physical education (women)[2]—4 hours.

(b) **Science.** At least 8 hours of a laboratory science chosen from the following list: botany, chemistry, geology, physics, zoology, biology. psychology, physical science.

(c) **Foreign language.** To be eligible for graduation a student must have completed twelve semester hours in a foreign language in college or two units for entrance and six hours in the same language in college.

(d) **English composition.** Ordinarily 6 hours of English composition (English 1 and 2) will be required of all freshmen. In case a freshman is not qualified to meet the requirements in English 1, as shown by placement or other tests, he (or she) will be assigned to English 1C, which carries 3 hours of University credit. Upon the successful completion of the work in English 1C the student will register for the regular work in English 1.

(e) **Additional.** At least 6 hours in each of three of the following:

(1) English (additional to d), or speech.
(2) Foreign language (additional to c).
(3) Mathematics.
(4) History.
(5) Political science.
(6) Economics or sociology.
(7) Philosophy and psychology.
(8) Home economics.
(9) Science (additional to b).
(10) General introductory courses.
(11) Art.

(f) **Electives,** under the supervision of the adviser, to make a total of 64 hours. Ordinarily freshmen should register for required courses. Electives should be used in the second year chiefly in meeting the preliminary requirements of the departments in which students expect to do the work of the major (or minors) in the upper division.

Upper-division Curriculum

1. **A major sequence** of 18 to 24 hours of upper-division courses, preceded by the proper lower-division courses prescribed as preparation for the major. This work should represent a coherent and progressive sequence of courses as outlined in the departmental announcements. The major subject will be selected when the student registers in the upper division, but the student must plan the work in the lower division in such a way as will meet the departmental requirements for the major and minor.
2. **A minor sequence** of 9 to 12 hours of upper-division courses, preceded by the proper lower-division courses, in some department closely related to the major department. At the option of the major department, a second minor of 6 hours may be required in a second department closely related to the major department.

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[1]Military science is required of all male students except those who at the time of matriculation are 23 years of age or have completed no less than 58 hours of work, and all who have credit for 6 hours of military science or 1 unit of entrance credit in military academy. Students must register for military science upon their entrance into the University and continue in the course until the full requirement has been met or until a regular examination card is filed in the Registrar's office.

[2]Two hours of physical education for men, to be taken during the first year of residence, and four hours of physical education for women, to be taken during the first and second years in residence, are required for graduation of students presenting fewer than 58 semester hours, unless previous credit has been allowed.

3. **Electives,** under the supervision of the departmental adviser, to make a total of 128 hours.[1] At least 52 of the 64 hours in the upper division must be selected from upper-division courses.[3] A departmental adviser may permit a student in the upper division to elect lower-division courses to an amount not exceeding 12 hours when such action will be an advantage to the student in connection with the major or minor sequence, but honor points will count only at the rate of 1 honor point per credit hour.

[1]A student may decrease the total number of hours required for graduation by doing work of superior quality. For details of this plan see page 56.

[3]A candidate for the B. S. in Chemistry should present 56 hours in upper-division courses.

B. Pre-Medical Curricula[2]

The following sequence of courses is worked out for the general guidance of students who are preparing for the study of Medicine. It includes all the required subjects. While the pre-medical student is meeting the minimum requirements of the School of Medicine as stated in the General Catalogue, the medical faculty prefers that he use his elective hours to secure a broad, general training rather than to secure a large number of credits in any one special field. Leading medical educators in the United States today also are definitely in favor of a good general training rather than extensive specialization in the so-called pre-medical sciences.

FIRST YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3
Chemistry 3	4	Chemistry 4	4
Biology 1 or Zoology 1	4	Zoology 2	4
Modern lang. or Latin	3	Modern lang. or Latin	3
Mil. sci.	1	Mil. sci.	1
Phys. educ.	1	Phys. educ.	1
	16		16

SECOND YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
English 13 or English 3	2 or 3	English 14 or **English 4**	**2 or 3**
Physics 1 & 3	4	**Physics 2 & 4**	**4**
Chemistry 5	4	Chemistry 15	3
Zoology, or math.,* or Psychol. 1, or cultural group†	3	Zoology, or Math. 10*, or Psychol. 1, or cultural group†	3
Modern lang.	3	Modern lang.	3
Mil. sci.	2	Mil. sci.	2
	17 or 18		16 or 17

THIRD YEAR

First Sem.	*Hrs.*
Chemistry 163 and Chemistry 136	**3 and 6**
Zoology 231*	**4**
Zoology group, or mathematics, or Psychology 101	3
Cultural group†	**12**
Related science group‡ or modern language	**4 to 6**
	32 or 34

FOURTH YEAR

Second Sem.	*Hrs.*
Chemistry group	**2 to 6**
Zoology group (including 231)*	**2 to 6**
Cultural group†	**12**
Related science group‡	**6**
Modern language group or electives as needed to complete hours required for graduation.	

[2]A specific statement concerning entrance requirements to the School of Medicine will be found on page 45.

C. Combined Courses[2]

ARTS AND MEDICINE

Course A. Students receive the Bachelor of Arts Degree upon the completion of four years of pre-medical work (128 hours), and the Bachelor of Science Degree at the completion of two years of medicine.

Course B. Students who enter the School of Medicine after the completion of the first three years (90 hours exclusive of military and physical education) of the pre-medical curriculum receive the Bachelor of Arts degree upon the completion of the first year of medicine, and the Bachelor of Science degree upon the completion of the second year of medicine.

Students who are working toward the combined A. B. degree described in Course B above while taking the courses in the School of Medicine must also be registered in the College of Arts and Sciences.

Modern Foreign Language Requirements:

Course A requires a reading knowledge of both French and German, with a minimum requirement of 18 hours. Course B requires a reading knowledge of either German or French, with a requirement of 12 hours, which may be divided between the two languages by students who present two units of either language for entrance.

D. Pre-Dental Courses

The following courses are planned for students preparing for the study of dentistry. In case a student expects to enter a certain school of dentistry these courses may be changed to suit his needs.

(1) TWO-YEAR COURSE

A course preparing for schools of dentistry requiring for entrance two years of pre-dental work. This course has, in addition to the minimum requirements, certain courses of general cultural value.

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	Physics 1 & 3	4	Physics 2 & 4	4
Chemistry 3	4	Chemistry 4	4	Chemistry 15	3	Chemistry 36	6
Biology 1	4	Zoology 3	4	and		Psychol. 1 or	
German		German or		Chemistry 63	3	Zoology 210	3
or French	3	French	3	Psychol. 1 or	3	German, French,	
Mil. sci.	1	Mil. sci.	1	Zoology 231	4	or English 4	3
Phys. educ.	1	Phys. educ.	1	German, French		Mil sci.	2
	16		16	or English 3	3		18
				Mil. sci.	2		
					18 or 19		

*Recommendations — Many medical schools require or recommend 6 hours of mathematics; some recommend that Zoology 231 (Comparative Anatomy) and courses in chemistry be taken the year before entering medical school; many require and many recommend a knowledge of Latin. The schedule provides for all these requirements and recommendations.

†Cultural group — To be chosen from English, humanities, economics, sociology, history, political science, philosophy, speech, foreign language, education, music.

‡Related science group — To be chosen from biology, botany, physics, mathematics, geology, psychology, genetics, pharmacy, physiology.

[2]A specific statement concerning entrance requirements to the School of Medicine will be found on page 45.

(2) THREE-YEAR COURSE

A course preparing for schools of dentistry requiring for entrance three years of pe-dental work. The first two years (60 hours) of this course are identical with course B except that, during the second year, French or German is taken. Students who enter an approved school of dentistry after completion of this course (90 hours exclusive of military and physical education) receive the Bachelor of Arts degree upon completion of the first year of dentistry, provided their applications receive approval by the Scholarship Committee.

THIRD YEAR: English 3 (3 hrs.) and 4 (3); economics or sociology or history or political science or modern language (18); Chemistry 107 (2) and 238 (5); physics or psychology or elective (3). Total, 34 hrs.

(3) FOUR-YEAR COURSE

A course preparing for schools of dentistry requiring for entrance four years of pre-dental work. On completion of this course (128 hours) students receive the Bachelor of Arts degree. The first three years of this course are identical with Course 2.

FOURTH YEAR: chemistry group (2-6); zoology group (2-6); cultural group (12); related-science group (6); modern-language group or electives as needed to complete the 128 hours for graduation.

PRE-PROFESSIONAL COURSES

Not leading to degrees in the College of Arts and Sciences

(A) Pre-Nursing Curriculum

The following arrangement of courses is worked out for the general guidance of students who are preparing for the profession of nursing. This curriculum includes all subjects generally required by professional schools of nursing. The tendency in nursing education is toward establishment of a requirement of at least two years of college work preparatory to entering a school of nursing. Students are advised to use their elective hours in the direction of a broad, general education and, if possible, to complete the requirements for the A. B. degree.

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	English Lit.	3	English Lit.	3
Chemistry 3	4	Chemistry 4	4	Lang. or elective	3	Lang. or elective	3
Zoology 1	4	Zoology 2	4	Sociology 1	3	Sociology 3	3
Lang. or elective	3	Lang. or elective	3	Psychology 1	3	Psychology 10	3
Phys. educ.	1	Phys. educ.	1	Phys. educ.	1	Phys. educ.	1
		Elective	3	Elective	3	Elective	5
	15		15 to 18		16		18

THIRD AND FOURTH YEARS

Students are advised to select psychology, sociology, or zoology as a major subject and one other subject in this group as a minor. If possible the student should select the school of nursing which she proposes to enter and use her electives in meeting pre-professional requirements or recommendations of that particular school.

(B) Pre-Professional Social Work

An undergraduate pre-professional social-work curriculum for juniors and seniors is available in the Department of Social Work.[1] The purpose of this curriculum is primarily to prepare students for admission to the graduate professional program in the Department of Social Work or to other graduate schools of social work, and to qualify students not able to obt in graduate work for beginning positions in social work.

(C) Pre-Education

Candidates for the degree of Bachelor of Science in Education are registered in the College of Arts and Sciences until they have completed 58 hours or more of academic work in the lower division of the College, with an honor-point average of 1.0. They are then transferred to the College of Education. During the Pre-Education period students are advised to complete as many as possible of the general courses required by the College of Education and for State certification, as shown in the bulletin, Requirements Applicable to Degrees and to Teacher Certification.

In addition to the above general academic requirements students are advised to complete as many as possible of the required academic courses in two teaching fields.

Upon the successful completion of the entire 64 hours of work in the lower division, Pre-Education students are eligible for the Junior Certificate of the College of Arts and Sciences.

TEACHING CERTIFICATES

The College of Education is authorized by the Board of Governors to recommend all applicants for teaching certificates.

Teaching certificates may be obtained by students registered in the College of Arts and Sciences as well as in the College of Education, provided they meet the requirements for teaching subjects.

For specific requirements in regard to certification see the Bulletin on Teacher Certification Regulations.

Candidates for the A. B. degree who wish to qualify for teaching certificates should indicate this fact to their adviser and plan their entire course with this in view. Unless this is done by the end of the freshman year, students may encounter difficulties in qualifying for the certificate by the time they receive the degree. As a check, consultation with Prof. Elizabeth M. Stalnaker, the adviser of Pre-Education students, should be had each semester.

(D) Pre-Journalism Curriculum

Candidates for the degree of Bachelor of Science in Journalism are registered in the College of Arts and Sciences until they have earned at least 58 semester hours of college credit. During the freshman and sophomore years they should have completed all or most courses specified for pre-journalism majors.

A pre-journalism student who has not maintained at least a C average in all his college subjects during his first two years is strongly advised not to en-

[1]For a detailed statement concerning the undergraduate social-work program see pages 171 to 173.

roll in the professional school. If his average grade in English 1 and English 2 was less than B, he should register for English 13 during his sophomore year. Before or soon after entering the University a prospective journalism student should master the touch system of typing, and before completing his sophomore year he is urged to have learned shorthand.

The recommended pre-journalism curriculum follows:

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	Newspaper Reporting	3	Newspaper Reporting	3
History 1	3	History 2	3	History 52	3	History 53	3
Science	4	Science	4	Foreign lang. or English 5*	3	Foreign lang. or English 4*	3
Foreign lang.	3	Foreign lang.	3	Economics 1	3	Economics 2	3
Phys. educ.	1	Introduction to U. S. Journalism	1	Psychology 1†	3	Polit. Sci. 5	3
Mil. sci. (men)	2	Phys. educ.	1	Mil. sci. (men)	2	Mil. sci. (men)	2
Electives	1 to 3	Mil. sci. (men)	2	Phys. educ. (women)	1	Phys. educ. (women)	1
		Elective	0 to 2	Electives‡	0 to 7	Electives‡	0 to 4
	16 to 17		16 to 17		16 to 17		16 to 17

(E) Arts and Law

Three years (96 hours) in the College of Arts and Sciences, and one year (28 hours) in the College of Law

A pre-legal course has two main objectives. The first is to enable the student to acquire a general cultural background, which is in harmony with the chief purpose of the College of Arts and Sciences. The second is to help the student to secure a more specialized background for the legal course that is to follow.

In nearly all cases these objectives can be attained more effectively by taking the regular four-year Arts and Sciences course, during the last two years of which the student may choose his major and minor with particular reference to his legal work. In addition to securing the Bachelor of Arts degree, it will qualify him for admission to almost any law school.

To enable students to receive the degree of Bachelor of Arts and Bachelor of Laws in a shorter period of time, a special course has been arranged by which the student may complete the required studies in the College of Arts and Sciences in three years and, after passing the entire first year of work in the College of Law, be awarded the degree of Bachelor of Arts. This course satisfies the entrance requirements to the College of Law but permits less freedom in choosing electives. All pre-legal students who did not make an average of B or better in English 1 and 2 are required to take English 13 and 14, two courses

*Majors unable to schedule English 4 and English 5 in their sophomore year will be required to take them in their junior year.

†A sophomore expecting to become a high-school teacher will choose an elective in his intended teaching field as a substitute for Psychology 1 and in his junior year will take Education 106, Educational Psychology.

‡Because of the growing demand for graduates trained for advertising promotion, circulation, and other positions in the business department of newspapers, sophomores are permitted to elect Jour. 110, "Newspaper Typography," or Jour. 113, "Principles of Advertising," or both, for the first semester if their schedules will permit. Because of the increasing public interest in radio journalism, sophomores may elect Jour. 122, "Elements of Radio Journalism", provided their schedules will permit.

with certain sections designed especially for pre-legal students. The student should confer with the pre-law adviser as soon as he enters the University. The following schedule is suggested as being adapted to the above course:

FIRST YEAR

First Sem.	*Hrs.*	Botany, chemistry, psychol.,	
English 1	3	*Second Sem.*	*Hrs.*
Botany, chemistry, psychol., geology, physics, zoology, or biology	4	English 2	3
		geology, physics, zoology, or biology	4
French, German, or Latin[1]	3	French, German, or Latin[1]	3
History 1 or	3	History 2 or	3
Humanities 1	4	Humanities 2	4
Mil. sci.	1	Mil. sci.	1
Phys. educ.	1	Phys. educ.	1
	15 or 16		15 or 16

SECOND YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
English 13	2	English 14	2
Language	3	Language	3
History 52	3	History 53	3
Polit. Science 5	3	Polit. Science 6	3
Electives (lower-division courses should be taken in the departments in which the student may wish to do upper-division work)		Electives	
		Mil. sci.	2
Mil. sci.	2		

THIRD YEAR

Pre-law major (upper-division work)	12
Pre-law minor (upper-division work)	9
Electives	9 to 15
	32 or more hours

FOURTH YEAR

28 hrs. in the College of Law

(F) Curriculum for the Degrees A. B. and B. S. in Agriculture

Students who desire a broader training than that furnished in the curriculum leading to the degree in agriculture are reminded that, by proper arrangement of their courses, they may obtain both degrees in five years. Such students will normally take the degree in the College of Arts and Sciences first, usually with major work in the field of biology. Several courses given in the College of Agriculture and required for the degree in agriculture are accepted as regular electives in the College of Arts and Sciences; in addition to these the student is permitted to elect fifteen semester hours from courses in colleges other than the College of Arts and Sciences; these may all be taken in the College of Agriculture. A suggestive list of courses, most of which should be taken during the first four years, follows:

Chemistry 3, 4, and 31 or 36; (a) Biology 1 and Botany 4 and Zoology 3; or (b) Botany 1 and 2 and Zoology 1 and 2; Physics 1, 2, 3, and 4; Economics 1 and 2 (or Economics 1 and Agricultural Economics 2); Geology 1; Bacteriology 141; Entomology 2 (possibly 103 or 204 in addition); Genetics 111 and 112 or 221; Plant Pathology 103 or 201; Animal Pathology 102 (possibly 206 also); Animal Husbandry 2, 203; Agronomy 2 (Soils).

Also 15 hours from the following group; more if possible:

Poultry 1; Agronomy 1; Horticulture 1; Dairy Husbandry 1; Animal Husbandry 102.

[1]Latin 1 and 2 are recommended for students not having entrance credit of 2 units in this subject.

In many of the organizations which employ men trained in agriculture the broader training suggested should give the student much greater prospect of employment. He should, of course, have the necessary agricultural background of a certain period of residence on a farm; the student who does not have this will be required, as are all candidates for the degree in agriculture, to satisfy the faculty of the College that he qualifies in this regard.

The specific course requirements and the group requirements as well as major and minor departmental requirements in the College of Arts and Sciences must be satisfied.

(G) Curriculum in Medical Technology

During the first two years the student is registered in the College of Arts and Sciences.

FIRST YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Chemistry 3	4	Chemistry 4	4
Zoology 1	4	Zoology 2	4
English 1	3	English 2	3
Modern lang.	3	Modern lang.	3
Electives	2	Electives	2
Physical educ.	1	Physical educ.	1
Mil. sci.	1	Mil. sci.	1
	18		18

SECOND YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Chemistry 5	4	Chemistry 12	4
English 3	3	English 4	3
Modern lang.	3	Modern lang.	3
Physics 1 & 3	4	Physics 2 & 4	4
Electives	2	Electives	2
Physical educ. (women)	1	Physical educ.	1
Mil. sci.	2	Mil. sci.	2
	19		19

During the last two years the student is under the jurisdiction of the School of Medicine.

THIRD YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Bacteriol. 220	5	Physiol. 141	4
Organic Chem. 131	4	Biochem. 139	4
Zoology 231	4	Parasitol. 120	3
Electives	4	Pathology 151	4
	17	Electives	2
			17

FOURTH YEAR

Continuous courses throughout 12 months. Practical work in laboratories.

	Hrs.		*Hrs.*
Applied Bacteriol. 101	4	Metabolimetry 106	2
Applied Parasitology 102	2	Microtechnique 107	3
Applied Serology 103	4	Normal Hematology 108	4
Clinical Chem. 104	3	Special Hematology 109	3
Electrocardiography 105	2	Keeping Records 110	2
		Urine Analysis 111	5

EXTENSION COURSES

As a part of the University Extension Service the College of Arts and Sciences and the College of Education from time to time have conducted at several centers in various parts of the State extension courses for which regular college credit has been given. The work given in the extension

courses corresponds in every particular, as to class requirements and credits, with that given in similar courses on the campus. Similar extension courses will be provided in other parts of the State when the facilities of the University will permit.

The giving of extension courses is subject to the following conditions: (1) Courses will not be organized at any place unless the demand is sufficient to justify it. (2) Courses offered by resident instructors will be given in Morgantown and in nearby places easy of access, generally on Friday afternoons and Saturdays. (3) Regular extension instructors will offer courses only in such places as can be reached from their headquarters.

VETERANS' EDUCATION

The Coordinated Program for Veterans of World War II

The College of Arts and Sciences, in accepting its responsibilities to the men and women in the Armed Forces, has planned for veterans* a coordinated program which conforms in general to the recommendations of the American Council on Education, the Armed Forces Institute, and the West Virginia State Board of Education. Accordingly this program, designed to meet the specific needs of veterans, provides for individual guidance and for appropriate educational placement based upon records of achievement, special abilities, and interests.

Registration

The Official Report and a record of high-school and college work, if any, should, if possible, be in the hands of the Registrar not less than three weeks before registration day.

Advanced Standing

In addition to credit granted for work certified by the Armed Forces Institute or by colleges, the student may, upon application to the Admissions Committee, receive advanced standing in any course regularly offered in the University for which he can pass a proficiency test.

Special Students

Veterans not interested in working for a degree may take any combination of courses for which they are qualified by registering as Special Students.

Refresher Courses

Returning veterans will not be segregated, but will become members of regular classes. However, if in some cases review or preparatory courses are needed to enable them to enter regular classes, such courses will be offered.

The Curriculum Committee on Veterans' Education

To implement this program the Curriculum Committee on Veterans' Education, appointed by the Dean of the College, is empowered, in dealing with veterans, to:

*For purposes of administration the term VETERANS refers to all former members of the Armed Forces—Army and Navy; WACS, WAVES, SPARS—and will also be construed to include former members of the Merchant Marine.

1. Grant a maximum of 8 semester hours' credit in basic military science and physical education service program to those who present evidence of having completed successfully the basic training courses in the Armed Forces. No additional work in military science or physical education will be required.

2. Allow additional credit in advanced military science and/or other specific subjects for training in officer or special technical schools.

3. Accept correspondence work done with duly accredited institutions of higher learning cooperating with the Armed Forces Institute for the amount of credit allowed by the institution with which the credit was earned.

4. Follow the regular policy of the American Council on Education in determining and recording credits for the Army specialized and Navy college-training programs.

5. Grant additional credits on the basis of tests administered or supplied by the Armed Forces Institute.

6. Approve courses of study, prepared by students in consultation with their advisers, when such courses of study require modification or elimination advisable, the admission of those who have not completed high school.
of certain requirements for the degree being sought.

7. Authorize, upon the basis of such tests as the Committee may deem

THE COURSES OF INSTRUCTION

The General Introductory Courses

The four general introductory courses, which cut across departmental lines, are designed to give the student a broad general education. They are recommended especially for those students who have not yet chosen a field of specialization. They will also be found useful in providing a general knowledge of subjects not covered by the student's field of major interest and in providing a broader perspective for later concentration in certain fields. These courses may be taken by any lower-division student in the College of Arts and Sciences or, with the consent of the dean or adviser, by students in other colleges or schools of the University. The courses are also open to upper-division students, but such students may count honor points only at the rate of one honor point per credit hour.

I. THE HUMANITIES

This course is designed to bring to the student's attention cross-sections of his civilization at those points where its development has been most significant. In accordance with this aim a substantial part of the course is its background of history, to which are added a survey of world literature, enough philosophy to acquaint the student with the principal thought patterns employed by Western man, the main developments in art and architecture, and some music.

The assigned readings constitute the most important features of the course, in that they supply most of the factual material. Lectures are primarily for the purpose of orientation—to help the student interpret the reading. Lectures on art, architecture, and music are illustrated. Weekly discussion periods are also an important part of the course. In them students meet in small groups with an instructor, and an effort is made to help them understand the

relation of the past to present-day problems. Through the aid of a syllabus, the course is shown in perspective in order that it may be better conceived as a whole.

1, 2. **General Introductory Courses in the Humanities.** I and II. 4 Hrs. per semester. Staff

111. **Symposium on Esthetics.** I. 3 Hrs.

112. **The Mediaeval Synthesis.** 3 Hrs. II. Presentation of the organic unity of mediaeval civilization as exemplified in literature, art, theology, and society. Emphasis will also be placed on the contributions of the Byzantine and Moslem Worlds to that unity. Illustrative material will include readings in the religious and secular works of the period, reproductions of mediaeval art and architecture and music.
Mr. Battles, Mr. Easton, and Mr. Patton

II. THE PHYSICAL SCIENCES

The Introductory Course in the Physical Sciences is intended to acquaint the student with the physical world in which he lives and has two main objectives: (1) to serve as an orientation course for those students who have not chosen their major field of interest, and (2) to present a broad general view of the physical sciences to students whose interests lie on other fields.

In its present form the course will carry four credit hours for each of two semesters. Two periods of each week will be devoted to formal lectures and desk demonstrations; one period a week will be used for discussion and quiz when the lecture sections will be divided into small groups; and one period a week will be devoted to laboratory demonstrations, museum displays, and field trips. Motion picture films will be used in connection with certain phases of the course. The syllabus is designed to give a general view of the whole field of the physical sciences as well as serve as a guide for weekly lectures, readings, and discussions.

1, 2. **General Introductory Course in the Physical Sciences.** I and II. 4 Hrs. per semester. Staff

III. THE SOCIAL SCIENCES

The general course in the social sciences is designed primarily for sophomores and is intended to give the student an understanding of the society in which he lives, with some indication of political, social, and economic trends which may alter this society in the future. It is based upon a plan of two lectures and one discussion period each week. At the discussion periods the content of the lectures for the week will be carefully analyzed, and concrete illustrations of principles expressed in the lectures will be studied.

For each lecture there will be certain required readings and a list of optional readings for students who desire to learn more about certain questions

1, 2. **Our Changing Social Order.** I and II. 3 Hrs. per semester. A study of the most significant social, economic, and political problems facing the American people, as they attempt to preserve democracy in a new world order. The course is designed for students in home economics, agriculture, engineering, physical education, music, laboratory sciences, and others desiring a general preparation for the responsibilities of democratic citizenship.

IV. THE BIOLOGICAL SCIENCES

1 2. **General Introductory Course in the Biological Sciences.** I and II. 4 Hrs. per semester.

Art

Associate Professor PATTON; Instructors WILT and AULL

The Department of Art offers technical courses in drawing, painting, and design; a nontechnical course in appreciation; and lecture courses in the history of the arts. Effort is made to provide for the needs of those interested in the cultural aspects of the arts, to meet the requirements of students planning further work of a technical nature, and to enable students in Education to meet the requirements for certification as art teachers.

For art majors the following lower-division program is recommended:

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	English 3	3	English 4	3
Foreign lang.	3	Foreign lang.	3	Foreign lang.	3	Foreign lang.	3
Laboratory sci.	4	Laboratory sci.	4	Humanities 1	4	Humanities 2	4
Art 11	3	Art 12	3	Art 113	3	Art 114	3
Mil. sci.	1	Art 30	3	Mil. sci.	2	Mil. sci.	2
Physical educ.	1	Mil. sci.	1	Physical educ.	1	Physical educ.	1
		Physical educ.	1	Elective	2	Elective	2
	15		18		18		18

COURSES OF INSTRUCTION

11 or 111, 12 or 112. Representation. I, II. 3 Hrs. per semester. Freehand drawing. Mr. Wilt

15, 115. Representation. I, II. 2 Hrs. Scientific drawing. Freehand drawing primarily for pre-medical and pre-dental students. Staff

30 or 130. Appreciation of Art. I or II. 3 Hrs. Enjoyment of architecture, painting, sculpture, and the minor arts. Mr. Patton

105, 106. Survey of Art. I, II. 3 Hrs. per semester. History of art from prehistoric times to the present. Offered in 1947-48 and alternate years. Mr. Patton

109. Art of Renaissance. I. 3 Hrs. Mr. Patton

110. Modern Art. II. 3 Hrs. Mr. Patton

113, 114. Representation. I, II. 3 Hrs. per semester. Painting. PR: Art 11, 12. Mr. Patton and Mr. Wilt

117, 118. Representation. I, II. 3 Hrs. per semester. Painting. PR: Art 113, 114. Mr. Patton and Mr. Wilt

120. Representation. I or II. 2 Hrs. Figure drawing. Study of the construction of the figure. Drawing from the draped model. PR: Art 11, 12, or consent of instructor. Mrs. Aull

121, 122. Fundamentals of Design. I, II. 3 Hrs. per semester. Mr. Patton

123. Lettering. I or II. 2 Hrs. Principles of design involved in lettering and their application. Mr. Patton

124. Pictorial Structure. I or II. 1 Hr. Comprehensive study of picture elements. PR: Registration in painting or consent of instructor. Mr. Wilt

126. Modeling. I, II. 2 Hrs. Introductory course in sculpture. PR: Consent of instructor. Mrs. Aull

127. Crafts. I or II. 2 Hrs. Crafts in their relation to the art program in the secondary school and to recreation programs. Staff

Biology

Professors STRAUSBAUGH, SPANGLER, TAYLOR, and CORE; Associate Professors AMMONS, ANDERSON, and GRIBBLE; Assistant Professor RITCHIE; Instructors DAVISSON, JONES, and LUNK

Students may select biology, botany, or zoology as their major subject. Biology 1 and 2 will be required of students who wish to major in either biology

or botany. Either Biology 1 and 2 or Zoology 1 and 2 will be required of students who elect to major in zoology. Combinations of general courses in biology and botany or zoology will not be permitted.

Prospective majors in either botany or zoology should include in their schedule of lower-division work Chemistry 1 and 2.

By permission of his adviser the student may select courses offered in other colleges and schools of the University, in partial fulfillment of the requirements for a major.

The following suggested curricula are not to be regarded as specific requirements but will serve as a guide in selection of subjects:

SUGGESTED CURRICULUM FOR THE A. B. DEGREE WITH A MAJOR IN BIOLOGY

Freshman	*Hrs.*	*Sophomore*	*Hrs.*	*Junior*	*Hrs.*	*Senior*	*Hrs.*
Biol. 1 and 2	8	Foreign lang.	6	Bact. 141	4	Biol. 291-292	2
English	6	Mil. sci.	4	Biol. 210	3	Zool. 151	4
Foreign lang.	6	Syst. Bot.	4	Genetics 221	3	Biol. 218	3
Gen. Intro. Courses in the Humanities 1 and 2	8	Gen. Intro. Courses in the Physical Sciences 1 and 2	8	Zool. 236 or 237	3	Zool. 235	4
Physical educ.	2	Gen. Intro. Courses in the Social Sciences 1 and 2	8	Botany 213	3	Electives	19
Military sci.	2	Zoology 16	2	Biology 207	4		
				Electives	12		
	32		32		32		32

SUGGESTED CURRICULUM FOR THE A. B. DEGREE WITH A MAJOR IN BOTANY

Freshman	*Hrs.*	*Sophomore*	*Hrs.*	*Junior*	*Hrs.*	*Senior*	*Hrs.*
Biol. 1 and 2	8	Foreign lang.	6	Bot. 211, 212	8	Botany 221	4
English	6	Physics 1 and 2	6	Botany 213	3	Botany 230	6
Foreign lang.	6	Syst. Bot.	4	Botany 131	4	Botany 234	4
Chem. 1 and 2	8	Physics 3 and 4	2	Biology 210	3	Biology 218	3
Physical educ.	2	Electives	10	Genetics 221	3	Biol. Seminar	2
Mil. sci.	2	Mil. sci.	4	Bacteriology 141	4	Botany 238	2
				Electives	8	Electives	11
	32		32		33		32

SUGGESTED CURRICULUM FOR THE A. B. DEGREE WITH A MAJOR IN ZOOLOGY

Freshman	*Hrs.*	*Sophomore*	*Hrs.*	*Junior*	*Hrs.*	*Senior*	*Hrs.*
Zool. 1 and 2 or Biol. 1 and 2	8	Foreign lang.	6	Zoology 231	5	Biol. 291-292	2
English	6	Mil. sci.	4	Zoology 207	4	Genetics 221	3
Foreign lang.	6	Zool. 51-151	4	Zoology 235	4	Zoology 238	4
Chem. 1 and 2	8	Physics 1 and 2	6	Zoology 218	3	Zoology 237	3
Physical educ.	2	Physics 3 and 4	2	Biology 210	3	Electives	20
Mil. sci.	2	Electives	10	Zoology 236	3		
				Electives	10		
	32		32		32		32

COURSES OF INSTRUCTION

BIOLOGY

Lower Division

1, 2. **General Biology.** I and II. 4 Hrs. per semester. Staff

Upper Division

201, 202. **Teaching Materials.** I and II. 3 Hrs. per semester. Survey of devices and materials available for teaching the biological sciences. Mr. Core

215. **Principles of Evolution.** II. 3 Hrs. Offered in 1948-49 and alternate years. Mr. Strausbaugh

218. **Biological Technique.** II. 3 Hrs. Theory and practice of making microscopic preparations, etc. PR: General course in biology, Zoology 2, or equivalent. Primarily for botany and zoology majors. Mr. Taylor

250. **History of Biology.** II. 3 Hrs. Offered in 1947-48 and alternate years. Mr. Strausbaugh

291, 292, 293, 294. **Seminar.** I and II. 1 Hr. per semester. Staff

BOTANY

Lower Division

1, 2. **General Botany.** I and II. 4 Hrs. per semester. Miss Ammons

3. **Dendrology.** I. 3 Hrs. Classification, identification, and distribution of the timber trees of the United States. PR: Biol. 2. Mr. Core

4. **Dendrology.** II. 3 Hrs. Continuation of Dendrology 3. Mr. Core

5. **Elementary Botany.** II. 4 Hrs. PR: Biology 1. For students in Agriculture. Mr. Strausbaugh and Mr. Core

21. **Plant Physiology.** I. 2 Hrs. Primarily for students in Forestry. Mr. Strausbaugh and Mr. Ritchie

30 or 130. **Systematic Botany.** II. 4 Hrs. Identification of seed plants and study of their classification. Mr. Core

32. **Systematic Botany.** II. 2 Hrs. Primarily for students in Forestry Mr. Core

Upper Division

211, 212. **Plant Morphology.** I and II. 4 Hrs. per semester. Development and structure of plants. Mr. Spangler

213. **Plant Anatomy.** I. 3 Hrs. PR: Botany 2 or equivalent. Miss Ammons

221. **Plant Physiology.** I. 4 Hrs. Functions of plants. PR: General courses in biology or botany, and Chemistry 1 and 2 or equivalent. Mr. Strausbaugh

222. **Advanced Plant Physiology.** II. 4 Hrs. PR: Botany 221 or equivalent; also courses in general physics and organic chemistry. Mr. Strausbaugh

230, 231. **Advanced Systematic Botany.** I and II. 1 to 6 Hrs. (maximum). Choice of work in any group of the plant kingdom. Staff

232. **Plant Ecology.** I. 3 Hrs. Environmental relationships of plants. Offered in 1948-49 and alternate years thereafter. Mr. Core

234. **Experimental Ecology.** II. 4 Hrs. PR: Biology 1 and Botany 131 or their equivalents. Staff

235s. **Field Studies in Botany.** SI. 6 Hrs. Essentially physiographic ecology, planned for botany majors and to meet the needs of those who intend to teach or are teaching botany. The studies will be conducted in various interesting regions of the state and the entire time will be spent in the field. Mr. ———

236. **Geographic Botany.** I. 3 Hrs. Study of plant groupings and world-wide distribution of plants. Offered in 1947-48 and alternate years. Mr. Core

238. **Bryology.** II. 2 Hrs. Identification of liverworts and mosses. Miss Ammons

Graduate Division

380, 381, 382, 383, 384. **Research.** I and II. 1 to 6 Hrs. Staff

ZOOLOGY

Lower Division

1, 2. **General Zoology.** I and II. 4 Hrs. per semester. Mr. Taylor and Staff

3. **Elementary Zoology.** II. 4 Hrs. For students in Agriculture. Mr. Taylor and Staff

5 or 105. **Ornithology.** II. 2 Hrs. Field and laboratory studies on the identification, migration, protection, nesting, and food habits of birds. Mr. Brooks

16 or 116. **Economic Zoology.** II. 2 Hrs. Ways in which animals are harmful or useful to man. Mr. Davisson

51 or 151. **Human Physiology.** II. 4 Hrs. Mr. Anderson

Upper Division

207. **Vertebrate Embryology.** II. 4 Hrs. An introductory study of the development of vertebrates, based chiefly on the frog, fowl, and mammal. PR: General Biology or Zoology 2, or equivalent. Mr. Gribble

220. **Introduction to Human Parasitology.** II. 4 Hrs. PR: Zoology 1 and 2 or equivalent. Primarily for pre-medical students. Mr. Taylor

230. **Osteology.** I. 2 Hrs. PR: General biology or Zoology 2 or equivalent. Mr. Gribble

231. **Comparative Anatomy.** I. 5 Hrs. Organs and systems of various vertebrates, together with other facts of interest concerning these animals. PR: General biology or Zoology 2 or equivalent. Mr. Gribble

232. **Comparative Neuro-anatomy.** II. 3 Hrs. PR: Zoology 2 or equivalent. Mr. Gribble

233. **Advanced Comparative Anatomy.** II. 4 Hrs. PR: Zoology 2 or equivalent. Mr. Gribble

235. **Invertebrate Zoology.** II. 4 Hrs. PR: Zoology 2 or equivalent. Mr. Jones

236. **Animal Behavior.** I. 3 Hrs. PR: Zoology 2 or equivalent. Offered in 1948-49 and alternate years. Mr. Taylor

237. **Animal Ecology.** I. 3 Hrs. PR: Zoology 2 or equivalent. Offered in 1947-48 and alternate years. Mr. Taylor

238. **General Physiology.** I. 4 Hrs. PR: Zoology 2 or equivalent. Mr. Anderson

241, 242, 243, 244. **Problems in Vertebrate Anatomy.** I and II. 1 to 4 Hrs. Mr. Gribble

245, 246. **Problems in Invertebrate Zoology.** I and II. 1 to 4 Hrs. Mr. Jones

247, 248. **Problems in Physiology.** I and II. 1 to 4 Hrs. Mr. Anderson

261s. **Field Zoology.** S1. 6 Hrs. Primarily for zoology majors and for those who teach or intend to teach zoology. This course aims to familiarize the students with the animal life of the state in its natural surroundings and includes the collection, identification, and study of habits of the various forms found in this region. PR: Zoology 2 or equivalent. Mr. Taylor

Graduate Division

380, 381, 382, 383, 384. **Research.** I and II. 1 to 6 Hrs. Staff

Chemistry

Professors CLARK, HUBERT HILL, DUSTMAN, DAVIES, COLLETT, and LAZZELL; Associate Professor GIBSON; Assistant Professor HALL; Instructors HICKMAN, MILLER, and POPOVICH

Chemistry 1 and 2 are prerequisite to all courses in chemistry. Chemistry 5, 6, 233, 238, 260, and 261; Mathematics[4] 107 and 108; minimum one year of physics[5] is required of candidates for the A. B. degree who major in chemistry. Mathematics through the calculus is required of majors.

Students entering the University with the intention of studying chemistry as a profession leading to a degree in the College of Arts and Sciences, with major in chemistry, should take Mathematics 3 and 4 and Chemistry 1 during the first semester of their first year.

A deposit is required of all students who take laboratory courses.

BACHELOR OF SCIENCE IN CHEMISTRY

The requirements for the Bachelor of Science in Chemistry degree are essentially the same as the requirements for the Bachelor of Arts degree with the major in chemistry for all non-chemical courses. The distinction lies mainly in the extra chemistry (elective) requirements.

Freshman	*Hrs.*	*Sophomore*	*Hrs.*	*Junior*	*Hrs.*	*Senior*	*Hrs.*
Chem. 1 & 2	8	Chem. 5	4	Chem. 233	5	Chem. 260	5
English	6	Chem. 6	5	Chem. 238	5	Chem. 261	5
Foreign lang.	6	Foreign lang.	6	Calculus 108	4	Chem. 251, 252	
Mathematics 3	4	Math. 5	4	Chem. electives	6	(Ind. Chem.)	6
Mathematics 4	2	Math. 107	4	Other electives	4	Other elec-	
Electives	4	Electives (not		Physics 105, 106	5	tives	11
Physical ed.	2	chemistry)	8	Physics 107, 108	5		
Military	2	Military	4				
	34		35		34		33

[4]If mathematics is elected as a minor, an additional 3-hour course beyond calculus (usually Differential Equations) is required.

[5]Physics 105, 106, 107, and 108 may count as a minor. If Physics 1, 2, 3 and 4 are offered, nine additional upper-division hours in physics are required to absolve the minor.

COURSES OF INSTRUCTION[1]

Lower Division

1. **Inorganic Chemistry.** I, II. 4 Hrs. Required of all students whose work calls for the first year of chemistry. Elective for others. Primarily for freshmen. Staff

2. **Inorganic Chemistry.** I, II. 4 Hrs. Required of all students whose work calls for first year of chemistry. Elective for others. Primarily for freshmen. Staff

5 **or 105. Qualitative Analysis.** I. 2 or 4 Hrs. Required of students whose major is chemistry, and pharmacy students. Two lectures and two three-hour laboratory periods. Engineering students only may take this course for 2 hours' credit. PR: Chemistry 1 and 2.

Mr. Hill and Mr. Gibson

[1]Chemistry 1 and 2 are prerequisite to all other courses in chemistry. Three-year and four-year pre-medical students are referred to page 124 for outline of required courses. For courses in biochemistry see page 247 and for courses in pharmaceutical chemistry see page 265. A deposit is required of all students who take laboratory courses.

6 or 106. **Quantitative Analysis.** II. 3 to 5 Hrs. Chemistry 5 should precede this course wherever possible. Required of students whose major is chemistry, mining engineering, and pharmacy. PR: Chemistry 1 and 2. Mr. Hill and Mr. Gibson

10. **Quantitative Analysis.** I. 2 Hrs. Primarily for engineering students. PR: Chemistry 3 and 4. Mr. Hill and Mr. Gibson

15 or 115. **Quantitative Analysis.** I, II. 3 Hrs. For pre-medical and chemical engineering students. PR: Chemistry 2. Mr. Hill and Mr. Gibson

31 or 131. **Organic Chemistry.** I. 4 Hrs. For students in agriculture and home economics. PR: Chemistry 2. Mr. Dustman

36 or 136. **Organic Chemistry.** II. 6 Hrs. Required of pre-medical and pharmacy students. PR: for pre-medical students, Chemistry 15 and 63. PR: for pharmacy students, Chemistry 6. Mr. Lazzell

63 or 163. **Physical Chemistry.** I. 3 Hrs. Required of pre-medical students. PR: Chemistry 2. Mr. Davis

Upper Division

107. **Quantitative Analysis.** II. 2 Hrs. Continuation of Chemistry 15 and 115. Mr. Hill and Mr. Gibson

111. **Synthetic Inorganic Chemistry.** I. 4 Hrs. PR: Chemistry 6 or 106. Mr. ————

141, 143. **Asssigned Topics.** I. 1 to 5 Hrs. Staff

142, 144. **Assigned Topics.** II. 1 to 5 Hrs. Staff

162. **The Chemistry of Colloids.** II. 4 Hrs. Required of four-year pre-medical students. Mr. Davies

208. **Quantitative Analysis.** I. 3 Hrs. PR: Chemistry 6, Physics 4 or 107 and 108, and Mathematics 5. Mr. Gibson

212. **Semi-micro-qualitative Analysis.** I or II. 2 or 3 Hrs. PR: Organic chemistry. Mr. Hill

214. **Organic Analysis.** I or II. 3 Hrs. PR. Chemistry 238. Staff

218. **Dairy Chemistry.** I. 3 Hrs. For students in the College of Agriculture. PR: for undergraduates, Chemistry 31; for graduates, Chemistry 6 or 15, and Chemistry 31 or 233.[2] Mr. Dustman

233. **Organic Chemistry.** I. 5 Hrs. Required of students who major in chemistry, of students in chemical and mining engineering. PR: Chemistry 6. Mr. Clark and Mr. Lazzell

238. **Organic Chemistry.** II. 4 or 5 Hrs. PR: Chemistry 233. Mr. Clark and Mr. Lazzell

247. **Stereochemistry.** I. 2 Hrs. Open to seniors. PR: Chemistry 238. Staff

251. **Industrial Inorganic Chemistry.** I. 3 Hrs. PR: Chemistry 5 and 6. Mr. Clark

252. **Industrial Inorganic Chemistry.** II. 3 Hrs. PR: Chemistry 233. Mr. Clark

260. **Physical Chemistry.** I. 3 to 5 Hrs. Required of chemistry majors and chemical engineering students, the latter for 3 hours' credit. PR: Chemistry 233, Physics 4 or 107 and 108, and Mathematics 108. Mr. Collett

261. **Physical Chemistry.** II. 3 to 5 Hrs. Required of chemical engineering students and chemistry majors. PR: Chemistry 260. Mr. Collett

274. **History of Chemistry.** II. 2 Hrs. Open to seniors. PR: Chemistry 6, or equivalent, and organic chemistry. Mr. Hill

275. **Modern Chemical Theories and Practices.** I, II. 2 Hrs. per semester. PR: 16 hours of chemistry. Not for graduate chemistry majors. Staff

277. **Synthetic Drugs.** I or II. 2 Hrs. PR: Chemistry 238 or equivalent. Mr. Lazzell

[2]Offered in alternate years; given 1948-49.

Graduate Division

316. Advanced Inorganic Chemistry. II. 2 Hrs. PR: Chemistry 261. Mr. ————

317. Modern Plastics. I or II. 2 or 3 Hrs. Staff

343. Advanced Organic Chemistry. I. 4 Hrs. PR: Chemistry 238 or equivalent. Mr. Lazzell

345. Theories of Organic Chemistry. II. 2 Hrs. PR: Chemistry 343. Mr. Lazzell

367. Advanced Physical Chemistry. I. 3 Hrs. PR: Chemistry 261. Mr. Davies

368. Advanced Physical Chemistry. II. 3 Hrs. PR: Chemistry 367. Mr. Davies

380. Electrochemistry. I or II. 3 Hrs. PR: Chemistry 238 and 261. Mr. Collett

383. Advanced Quantitative Analysis. I or II. 3 Hrs. PR: Chemistry 6, 238, 261. Mr. Hill

388. Valence and Molecular Structure.[1] I or II. 2 Hrs. PR: Mathematics 108, Physics 108, Chemistry 261. Mr. Gibson and Mr. Hall

389, 390. Chemical Thermodynamics.[2] I or II. 2 Hrs. per semester. PR: Chemistry 261 and Mathematics 208. Mr. Gibson

391, 392. Journal Meeting and Seminar. I or II. 1 Hr. per semester. Required of students working for graduate degrees with major in chemistry. Recommended as a minor for students from other departments. Mr. Clark and Staff

395, 396. Special Topics. I and II. 1 to 3 Hrs. per semester. Chemistry of the carbohydrates, organic nitrogen compounds, the phase rule, dyes and dye intermediates, food analysis, study of chemical literature as preparation for research, chemical microscopy and crystallography, chemical kinetics are suggested topics. Staff

397, 398, 399A, 399B. Research. I and II. 1 to 6 Hrs. per semester. 6 Hrs. Required for the Master's degree. More than 6 Hrs. each semester may be carried by candidates for a higher degree. Staff

[1]To alternate with Chemistry 389, 390.
[2]Offered in alternate years; given 1948-49.

Classics

Professor BROUZAS

The department of classics offers courses in the Greek and Latin languages and in classical civilization. Courses in the department are intended not only to give students a thorough knowledge of the Greek and Latin languages and literatures but also to acquaint them with the classical culture in general. A student with major in Latin should plan to include at least 6 hours of Greek in his course, preferably in the sophomore year.

Courses suggested for classics majors with English as a second teaching field for certification in West Virginia:

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	English 65[1]	3	Journalism 15[1]	3
English 3[1]	3	English 4[1]	3	Latin	3	Latin	3
Latin (according to preparation)	3	Latin	3	Greek 1	3	Greek 2	3
Laboratory sci.[2]	4	Laboratory sci.[2]	4	Sociology or economics	3	Sociology or economics	3
Physical educ.	1	Physical educ.	1	Physical educ.	1	Speech[1]	3
Elective	2	Elective	2	Elective	3	Elective	2
	16		16		16		17

COURSES OF INSTRUCTION

LATIN

Lower Division

1. **Elementary Latin.** I. 3 Hrs. Elements of the Latin language. Completion of a standard beginner's book.
2. **Elementary Latin.** II. 3 Hrs. Continuation of Latin 1, consisting of study of a standard second-year book.
3. **Intermediate Latin.** I. 3 Hrs. Selections from Caesar, Aulus Gellius, Nepos, and from other authors of comparable ease, designed to prepare students to read orations of Cicero and other Latin of similar difficulty. PR: Latin 2 or two units of high-school Latin.
4. **Cicero's Orations.** II. 3 Hrs. PR: Latin 3, or 2 units of high-school Latin.
5. **Latin for Law Students: Selections from Legal Latin and the Institutes of Justinian.** II. 3 Hrs. PR: Latin 3 or 2 units of high-school Latin.
6. **Vergil's Aeneid.** II. 3 Hrs. PR: Latin 4 or 3 units of high-school Latin.
12. **Selections from Roman Prose.** I. 3 Hrs. Cato to the end of the Silver Latin period. PR: Latin 4 and 6.
14. **Roman Comedy.** I. 3 Hrs. Plautus, Captivi, or Menaechmi; Terence, Adelphoe, or Andria. PR: Latin 4 and 6, or 4 units of high-school Latin.
21. **Roman Letter-writing.** II. 3 Hrs. Selections from the letters of Cicero, Pliny, Marcus Aurelius, and Fronto. PR: Latin 4 and 6 or 4 units of high-school Latin.
22. **Selections from Roman Poetry.** I. 3 Hrs. Selections from the elegiac, lyric, and iambic poets and from Martial's epigrams. PR: Latin 4 and 6 or equivalent.
23. **Livy and Cicero.** II. 3 Hrs. Selections from Livy books 21 and 22; Cicero's **De Senectute** or **De Amicitia.** PR: Latin 14 and 21, or equivlent.
24. **The Lyric and Bucolic Poets.** II. 3 Hrs. Selections from Horace's Odes and Epodes; from Catullus and other poets; selections from the Bucolics of Vergil and Calpurnius.
25. **Latin Composition.** II. 3 Hrs. A review of the principles and syntax of the Latin language, and practice in writing simple Latin. PR: Latin 14 and 21, or equivalent.

Upper Division

130. **Leadership in Classical Club.** II. 2 Hrs. Materials for enriching, vivifying and making Latin concrete; Latin posters, scrap books, Latin derivatives in English and modern languages, Latin playlets, Latin mottoes, proverbs, mythological allusions, etc. PR: Four years of high school Latin or twelve hours of Latin taken in college. Offered every other year. Approved for high-school certification in co-curricular activity.
201. **The Story and Novel.** I. 3 Hrs. The story and novel from Homer to Apuleius. Select reading from Petronius and Apuleius. PR: Latin 12, 14, 21, 22, or equivalent.
202. **Drama.** II. 3 Hrs. The ancient drama, its origin, and development. Select dramas of Plautus, Terence, and Seneca. PR: Latin 12, 14, 21, 22, or equivalent.
203. **Roman Oratory.** II. 3 Hrs. Selections from Cicero's works on oratory and from Quintilian. Select orations of Cicero. PR: Latin 12, 14, 21, and 24, or equivalent.
227. **Vulgar Latin—Prose and Verse.** I. 3 Hrs. Selections from old Latin inscriptions and from late and mediaeval Latin writers. Lectures on the

[1]Students wishing to offer social science for certification may substitute history for this course.

[2]Students who wish to have social studies as their second teaching field may elect geology for the laboratory science.

history of the Latin language, and the formation of the Romance languages. PR: Latin 12, 14, 21, and 24, or equivalent.

231. **Satire.** II. 3 Hrs. Horace, Satires and Epistles; selections from Juvenal and Persius. PR: Latin 12, 14, 21, and 22, or equivalent.

234. **History.** I. 3 Hrs. Selections from Livy, and Tacitus, Agricola, or Annals; Suetonius, Life of Julius or Augustus, Sallust, Catiline. PR: Latin 12, 21, and 24, or equivalent.

235. **Epic.** I. 3 Hrs. Vergil's **Aeneid** and the later Epic. PR: Latin 12, 22, and 24, or equivalent.

236. **Philosophy.** II. 3 Hrs. Cicero's **Tusculan Disputations** or **De Officiis**; Seneca's **Dialogues** and **Epistles.** PR: Latin 12, 21, 22, and 24, or equivalent.

Graduate Division

381, 382. **Seminar.** I and II. 3 Hrs. per semester.
383, 384. **Thesis.**

CLASSICAL CIVILIZATION[1]

Upper Division

237. **Greek and Roman Religion and Art.** I. 3 Hrs. A study of the Greek and Roman religious ideas and myths, with particular emphasis on their influence upon the art and literature of the ancient and the modern world.

239. **Greek and Roman Life and Thought.** I. 3 Hrs. A survey of Greek and Roman culture and thought as reflected in classical literature. PR: Greek 1 and 2, Latin 12 and 22, or equivalent.

GREEK

Lower Division

1. **Elementary Greek.** I. 3 Hrs. A course in the elements of the Greek language. Offered in 1947-48 and alternate years.
2. **Selections from Greek Literature (Prose).** II. 3 Hrs.
3. **Selections from Greek Literature (Poetry).** II. 3 Hrs.
4. **Selections from Hellenistic and Biblical Greek Literature.** I. 3 Hrs.
5. **Selections from Medieval and Modern Greek Literature.** II. 3 Hrs.

[1]These courses are offered as being of cultural value to all students. They present a picture of a cross-section of the Greek and Roman society, life, manners, thought, literature, art, science, and law. The study of the influence of classical antiquity upon the subsequent periods prepares one for a better appreciation of modern civilization. Each course may be taken separately, if so desired.

Economics and Business Administration

Professors TOWER and DADISMAN; Associate Professors ROBERTS, SHUPLAND, and WHERRY; Instructor COUTTS; Lecturers FARMER and KIRSCH

GENERAL OBJECTIVES

The program of the Department of Economics and Business Administration has been designed to meet the specialized needs of students who are preparing for careers in commerce and industry and to provide a general education for them as well as for that group who, after a period of graduate training, plan to engage in the professional practice of economics. It has been so arranged as to require only those courses which are fundamental to a sound business training while allowing the student considerable latitude in selection of electives in his major and minor fields as well as in other areas of study.

While every businessman should become proficient in the technique and practices of his profession, it is equally important that he be fitted to assume the responsbilities of intelligent citizenship and the social obligations which

his position will entail. He should become thoroughly competent in his own field, but at the same time he should acquire a broad general culture in order better to understand and appreciate those enduring values upon which modern civilization rests. To accomplsh this latter objective, the student whose major field is economics or business is strongly urged to orient his program of study in such a manner that the end result will be an educated man and not merely a technician.

DEGREE REQUIREMENTS FOR GRADUATION

The department offers programs of training leading to either the A. B. degree with a major in economics or the B. S. degree with a major in business administration. Within the broad field of business administration the student may concentrate his preparation in the special areas of accounting, banking and finance, management, marketing and merchandising, real estate and insurance, secretarial studies, or public administration.

A candidate for the A. B. degree with a major in economics must complete a minimum of 128 college hours for graduation. He must also complete a minimum of 24 upper-division hours in the Department of Economics and Business Administration before receiving his degree. Of this group a minimum of 18 hours must be taken in the field of economics as distinct from business administration. However, in no instance will he be given undergraduate credit for more than 40 college hours of work in economics and business administration combined. Finally, he must complete a minimum of 9 upper-division college hours in another field approved by his adviser for a minor subject.

A candidate for the B. S. degree with a major in business administration must complete a minimum of 132 college hours for graduation. He must also complete a minimum of 30 upper-division hours in the Department of Economics and Business Administration before receiving his degree. He may receive undergraduate credit for a maximum of 54 college hours taken in the department, and he, too, must complete a minimum of 9 upper-division college hours in another field approved by his adviser for a minor subject.

Candidates for either degree must present satisfactory evidence of the fact that they have completed Business 3, Business Mathematics, or its equivalent, Economics 1 and 2, Principles of Economics, and Economics 131, Business Statistics. Candidates for the A.B. degree must complete Economics 132 in addition to the group of subjects indicated above, while candidates for the B.S. degree must complete additionally Business 5 and 6, Principles of Accounting, and Business 101, Intermediate Accounting, before graduation.

Candidates for either degree must complete a minimum of 54 college hours at the upper-division level out of the total number of hours required for graduation.

CURRICULUM IN ECONOMICS AND BUSINESS ADMINISTRATION

The Lower-division Program

The lower-division program is designed to meet certain basic requirements for all students who matriculate in the College of Arts and Sciences and to provide a knowledge of fundamental subjects essential to the effective study of economics and business administration. Candidates for either the A. B. degree

with a major in economics or the B. S. degree with a major in business administration are expected to complete the following courses or course groups during their first two years at the University:

FIRST YEAR	SECOND YEAR
English 1, 2	English 13, 14, or 16
Foreign language	Economics 1, 2
History 1, 2, or Humanities 1, 2	Foreign language (if not already completed)
Psychology 3, 4	Political Science 5, 6, or History 52, 53
Library Science 1	Speech 11
Business 3 or equivalent	Philosophy 4
Physical education (men and women)	Business 5, 6 (candidates for the B. S. degree only)
Military science (men)	Physical education (women)
	Military science (men)

THE UPPER-DIVISION PROGRAM

CURRICULUM FOR THE A. B. DEGREE WITH A MAJOR IN ECONOMICS

Professor DADISMAN, Adviser

Courses in the Department Required of Economics Majors:

Economics 111, Money and Banking
Economics 200, Land Economics
Economics 238, Economic Theory
Economics 240, Labor Relations

Additional Courses Recommended in the Department:

A minimum of 6 college hours to be selected from the following groups:
Economics 114, 233, 241, 244, 262
Business 133, 242, 251, 252

Courses Recommended Outside the Department:

Courses outside the Department are to be selected only after consultation with the student's faculty adviser. Representative courses in the following departments are recommended for economics majors; English, speech, psychology and philosophy, sociology, mathematics, history, political science, fine arts, and geology.

CURRICULUM FOR THE B. S. DEGREE WITH A MAJOR IN BUSINESS ADMINISTRATION

Professor TOWER, Adviser

Courses in the Department Required of Public-administration Majors:

Economics 238, Economic Theory
Economics 262, Public Finance
Business 245, Personnel Management
Business 208, Municipal Accounting
Business 251, 252, Business and the State

Additional Courses Recommended in the Department:

A minimum of 8 college hours to be selected from the following groups:
Economics 111, 114, 132, 200, 233, 240, 244
Business 133, 141, 142, 181, 242

Courses Recommended Outside the Department:

Students majoring in this field should plan to do their minor work in political science. Additional courses in history and law and a good groundwork in philosophy are also important elements in the training of those who plan to enter the public service.

BANKING AND FINANCE

———, Adviser

Courses in the Department Required of Banking and Finance Majors:

Economics 111, Money and Banking
Economics 114, Corporation Finance
Economics 238, Economic Theory
Economics 201, Real Estate
Business 133, General Insurance
Business 156, Banking

Additional Courses Recommended in the Department:

A minimum of 6 college hours to be selected from the following groups:
Economics 132, 200, 241, 244
Business 108, 127, 130, 141, 142, 181, 204, 224, 257, 270

Courses Recommended Outside the Department:

See recommendations under Economics Major. Courses in English, speech, and psychology will be particularly helpful to students who are planning careers in banking or finance.

MANAGEMENT

Associate Professor SHILLAND, Adviser

Courses in the Department Required of Management Majors:

Economics 240, Labor Relations
Economics 237, Trade Unionism, or Economics 239, Collective Bargaining and Labor Legislation
Business 181, Business Management
Business 245, Personnel Management
Business 203, Cost Accounting

Additional Courses Recommended in the Department:

A minimum of 10 college hours to be selected from the following groups:
Economics 114, 132, 201, 241, 244, 262
Business 121, 127, 130, 133, 141, 142, 206, 224, 226, 257, 270

Courses Recommended Outside the Department:

Students majoring in management should plan to do their minor work in psychology. For a list of other appropriate elective fields see recommendations under Economics Major.

SECRETARIAL STUDIES

Instructor COUTTS, Adviser

Courses in the Department Required of Secretarial-studies Majors:

Business 143, 144,* Typewriting
Business 145, 146 Shorthand
Business 147, Secretarial Training and Office Practices
Business 141, Business Law

Additional Courses Recommended in the Department:

A minimum of 6 college hours to be selected from the following group:
Business 121, 127, 128, 130, 133, 181, 224, 245, 257, 270

Courses Recommended Outside the Department:

English, psychology, or speech are good minor subjects for students planning to enter the secretarial field upon graduation. For a list of other appropriate elective fields see recommendations under Economics Major.

MARKETING AND MERCHANDISING

Associate Professor ROBERTS, Adviser

Courses in the Department Required of Marketing and Merchandising Majors:

*Business 148, Transcription, may be offered in place of Business 144, Typewriting, by qualified majors.

Business 121, Principles of Marketing
Business 122, Marketing of Manufactured Goods
Business 125, Retailing
Business 128, Advertising
Business 127, Salesmanship, or Business 130, Sales Management

Additional Courses Recommended in the Department:

A minimum of 10 college hours to be selected from the following groups:
Economics 114, 241, 244.
Business 133, 141, 142, 224, 225, 231, 232, 242, 257, 270, 181

Additional Courses Recommended Outside the Department:

Students planning to major in marketing and merchandising should plan to do their minor work in either English, psychology, or speech. Other appropriate elective fields are listed under Economics Major.

ACCOUNTING

Associate Professor WHERRY, Adviser

Courses in the Department Required of Accounting Majors:
Business 102, Advanced Accounting
Business 108, Analysis of Financial Statements
Business 203, 204, Cost Accounting
Business 206, Income-tax Accounting
Business 207, Auditing
Business 208, Municipal Accounting
Business 212, Accounting Systems
Business 141, 142, Business Law

Additional Courses Recommended in the Department:

Courses in excess of the minimum departmental requirements may be elected from the following groups:
Economics 111, 114, 132, 240, 262
Business 121, 133, 181, 224, 257

Additional Courses Recommended Outside the Department:

See elective subjects listed under Economics Major

REAL ESTATE AND INSURANCE

————, Adviser

Courses in the Department Required of Real-estate and Insurance Majors:
Economics 200, Land Economics
Economics 201, Real Estate
Business 133, General Insurance
Business 135, Life Insurance
Business 136, Casualty Insurance
Business 141, 142, Business Law

Additional Courses Recommended in the Department:

A minimum of 5 college hours to be selected from the following groups:
Economics 111, 114, 241, 244, 262
Business 121, 127, 130, 224, 257, 270

Additional Courses Recommended Outside the Department:

Sociology, speech, or psychology are appropriate minor subjects for students who plan to enter the fields of real estate and insurance upon graduation. Other suitable elective subjects are listed under Economics Major.

COURSES OF INSTRUCTION

ECONOMICS

Lower Division

1. **Principles of Economics.** I, II. 3 Hrs. Organization of economic activity; elementary principles of economic activity. Staff

2. **Principles of Economics.** I, II. 3 Hrs. Economics 1 and 2 are prerequisite to upper-division courses. Staff
30. **Fundamentals of Economics.** For engineers. I. 3 Hrs. Staff

Upper Division

103. **Economics and Accounting.** I. 3 Hrs. Of primary importance to Engineering students. Staff
111. **Money and Banking.** I. 3 Hrs. Our system of monetary and banking arrangements, viewed in relation to functioning of the economic system as a whole. PR: Econ. 1 and 2. Staff
114 **Corporation Finance.** II. 3 Hrs. The corporate factor in present-day economic life with particular reference to its financial aspects. PR: Econ. 1 and 2 or permission of instructor. Staff
131. **Business Statistics.** I. 3 Hrs. Methods of collecting, presenting, analyzing, and interpreting business data, with special emphasis on index numbers, trend fitting, seasonal corrections, and correlation. PR: Econ. 1 and 2 and a knowledge of elementary algebra. Mr. Tower
132. **Problems in Statistics.** II. 3 Hrs. Sampling theory, complex trends, multiple and partial correlations; statistical research. PR: Econ. 131 and consent of instructor. Mr. Tower
173. **Economics of Consumption.** I. 3 Hrs. Place of consumer in modern society; business practices and policies affecting everyday interests of consumer; consumer problems and their solution. PR: Econ. 1 and 2 or consent of instructor. Mr. Tower
200. **Land Economics.** I. 3 Hrs. A land-policies course; characteristics, utilization, and conservation of urban, rural, mineral, forest, and recreational land. PR: Econ. 1 and 2. Mr. Dadisman
201. **Real Estate.** II. 3 Hrs. Principles and practices of the business of real estate. PR: Econ. 200 or consent of instructor. Mr. Dadisman
233. **Comparative Economic Systems.** I. 3 Hrs. Structure and processes of existing economic systems throughout the world including a review of the basic principles of free enterprise, socialistic, communistic, and fascistic societies. Comprehensive analysis based on current and recent experiments in these economics. PR: Econ. 1 and 2. Staff
236. **Labor Movements.** II. 3 Hrs.
237. **Trade Unionism.** I. 3 Hrs. Policies and attitudes of trade unions with reference to production involving study of a variety of practices and shop rules together with analysis of relationships between trades unions and employers. PR: Econ. 240, 1, and 2. Mr. Shilland
238. **Economic Theory.** II. 3 Hrs. Intended primarily to afford training and experience in use of those analytical methods and techniques which are specially helpful in dealing with fundamental economic problems. PR: Econ. 1 and 2. Staff
239. **Collective Bargaining and Labor Legislation.** I. 3 Hrs. Labor-management relations in terms of recently developed movements in this field as covered by comprehensive surveys that present the leading issues and problems. Influence of government is also considered insofar as it seeks to regulate such labor-management relations. PR: Econ. 1, 2, and 240. Mr. Shilland
240. **Labor Relations.** II. 3 Hrs. History of modern labor movements; analysis of economic and social problems arising from relations between capital, labor, and the state. PR: Econ. 1 and 2. Mr. Shilland
241. **Transportation.** I. 3 Hrs. Nature, history, and problems of inland transportation, with special reference to the United States. PR: Econ. 1 and 2. Mr. Dadisman
244. **Public Utilities.** II. 2 Hrs. Development of regulation; economics of valuation, rate-making, and "Federal Power Policy." PR: Econ. 1 and 2. Staff
262. **Public Finance.** II. 3 Hrs. Fiscal organization and administration of modern governments; public expenditures; governmental revenues; problems of public debt. PR: Econ. 1 and 2. Mr. Tower

Graduate Division

311. **Problems in Land Economics.** I. 2 Hrs. PR: Econ. 200. Mr. Dadisman
315. **Transportation Problems.** I. 2 Hrs. PR: Econ. 241. Mr. Dadisman
325. **Monetary and Banking Problems.** II. 2 Hrs. Individual graduate study. PR: Econ. 111. Staff
328. **Problems in Corporation Finance.** II. 2 Hrs. Individual graduate study. PR: Econ. 114. Staff
351. **History of Economic Thought.** I. 3 Hrs. Economic ideas in the perspective of their historic development. PR: Econ. 238 Staff
352. **Advanced Economic Theory.** II. 3 Hrs. Recent developments in economic theory such as those relating to imperfect competition, monetary problems, and collectivist economy. PR: Econ. 238. Staff
358. **Bibliography and Research.** II. 2 Hrs. Research methods, sources of information, technique, devices, approaches, procedures, research analysis, and presentation of results. PR: Consent of instructor. Mr. Dadisman
361. **Taxation.** I. 3 Hrs. Comparative study of taxes and tax systems. Particular emphasis upon tax structures of the Federal government and the State of West Virginia. PR: Econ. 262 or consent of instructor. Mr. Tower
362. **Taxation Seminar.** II. 2 Hrs. Selected problems in taxation involving considerable original research; current literature. PR: Econ. 361 or consent of instructor. Mr. Tower
373, 374. **Thesis.** I, II. 2 or 3 Hrs. per semester. Staff
390, 391. **Seminar in Economics.** I, II. 2 Hrs. per semester. Staff

BUSINESS ADMINISTRATION

Lower Division

3. **Business Mathematics.** I. 2 Hrs. Percentage relationship, application of percentage, properties of formulas, interest computations, and laws of equations. Staff
5. **Principles of Accounting.** I. 3 Hrs. Fundamental bookkeeping procedures and preparation of financial statements. Mr. Wherry
6. **Principles of Accounting.** II. 3 Hrs. Interpretation of commercial and industrial records. Uses which may be made of accounting data in operating business enterprises. PR: Business 5. Mr. Wherry
7. **Business Communications.** II. 3 Hrs. A study of the vocabulary and technique of business writing as applied to various forms of research and reporting. Correct English usage in modern business forms and letters. PR: 8 hrs. of English composition. Miss Coutts

Upper Division

101. **Intermediate Accounting.** I. 3 Hrs. Valuation of accounts, working capital, and profit-and-loss analysis, comparative statements, and source and application of funds. PR: Business 6. Mr. Wherry
102. **Advanced Accounting.** II. 3 Hrs. As applied to partnerships, corporations, branch offices, subsidiaries, and foreign trade. PR: Business 101. Mr. Wherry
108. **Analysis of Financial Statements.** II. 3 Hrs. Expands use of financial statements beyond the accounting interpretation. Desirability of supplementary information. Analysis of small business enterprises. Internal analysis of balance sheets and profit-and-loss statements. PR: Business 101. Mr. Wherry
110. **Accounting for Engineers.** II. 2 Hrs. Of primary importance to Engineering students. PR: Economics 103. Staff
121. **Elements of Marketing.** I. 3 Hrs. The economic functions of marketing, principles of marketing industrial and consumer goods, contemporary marketing problems. PR: Econ. 1 and 2. Mr. Roberts
122. **Marketing of Manufactured Goods.** II. 3 Hrs. Case method applied to modern problems of sales management. Particular attention to manufactured goods. PR: Business 121. Mr. Roberts

125. **Retailing.** I. 3 Hrs. Retail-store organization, control, and other operating problems and policies in present-day retail outlets. PR: Business 121 and 122. Mr. Roberts

127. **Salesmanship.** II. 2 Hrs. Essentials of creative salesmanship and art of selling with practical illustrations and demonstrations. Staff

128. **Advertising.** II. 3 Hrs. Techniques and procedure of local and national advertising using the problem approach. Mr. Roberts

133. **General Insurance.** I. 3 Hrs. Theory of risk and its application to insurance. Principles underlying all forms of insurance—life, property, casualty, fire surety. PR: Econ. 1 and 2. Mr. Wherry

135. **Life Insurance.** I. 2 Hrs. Principles as they influence economic and social life of the community, and legal regulation of insurance companies. PR: Business 133. Mr. Wherry

136. **Casualty Insurance.** II. 2 Hrs. Nature of and reasons for existing practices in casualty insurance. Fire, marine, liability, automobile, title, and credit insurance and corporate bonding. PR: Business 133. Mr. Wherry

139. **Sales Management.** II. 2 Hrs. Selection, training, compensating, and supervising of salesmen; sales control by means of quotas, sales budgets, properly balanced sales territories, and routes; sales promotion. PR: Business 121 or 127. Staff

141, 142. **Business Law.** I, II. 3 Hrs. per semester. Fundamentals of the law of contracts, agency, negotiable instruments, partnership, corporations, and sales as applied to business situations. Not open to students preparing for Law degree. Mr. Farmer

143, 144. **Typewriting.** I, II. 2 Hrs. per semester. Instruction in formation of accurate typing habits. Miss Coutts

145. **Shorthand.** I. 4 Hrs. Gregg shorthand for beginners. Miss Coutts

146. **Shorthand.** II. 4 Hrs. Intensive review of fundamental principles of Gregg shorthand; development of accurate writing principles and ability to transcribe business and manuscript materials. Miss Coutts

147. **Secretarial Training and Office Practice.** I. 3 Hrs. Supervised practice in operation of calculating, duplicating, and transcribing machines; study of representative filing systems, proofreading, and business forms. Miss Coutts

148. **Transcription.** II. 2 Hrs. A course in transcription for advanced students of typewriting and shorthand. Offered only during the second semester of each year. PR: consent of the instructor. Miss Coutts

156. **Banking.** I. 3 Hrs. Banking policies and practices of concern both to those who operate banks and to those who use their services. PR: Econ. 111. Staff

181. **Business Management.** II. 2 Hrs. Principles of organization, system control, standards, research, public relations, executive decisions, as applied to the modern business unit. PR: Econ. 1 and 2 and Business 5 and 6 or consent of instructor. Staff

203, 204. **Cost Accounting.** I, II. 2 Hrs. per semester. Application of labor, material, and burden costs to the product unit under job-order or process costing. Standard costs. PR: Business 101. Mr. Wherry

206. **Income-tax Accounting.** II. 2 Hrs. Preparation of income-tax returns from accounts of individuals, partnerships, and corporations. PR: Business 101. Mr. Kirsch

207. **Auditing.** I. 2 Hrs. Duties and responsibilities of auditor; methods of verification of balance sheet and profit-and-loss accounts; working papers and schedules, audit reports, and certificates. PR: Business 101, 102, 204, 206, or consent of instructor. Mr. Kirsch

208. **Municipal Accounting.** II. 3 Hrs. Principles of governmental accounting and fiscal administration. Accounting for funds. Revenues and expenditures. Assets and liabilities. Reporting. Federal accounting. Staff

212. **Accounting Systems.** II. 2 Hrs. Building accounting systems; journals and ledgers; types of accounting systems; account charts and manual of instruction; study of selected accounting systems. PR: Business 101. Staff

224. **Credits and Collections.** II. 3 Hrs. Principles and practices of credit management with particular attention to mercantile credit. PR: Business 121. Mr. Roberts

226. **Industrial Purchasing.** II. 3 Hrs. Corporate and governmental procurement problems facing the modern purchasing executive. PR: Econ. 1 and 2. Mr. Roberts

231, 232. **Marketing Research.** I, II. 2 Hrs. per semester. The purpose of this course is to train students in the utilization of present-day marketing research techniques in the solution of practical marketing problems with particular reference to West Virginia. PR: Open to senior and graduate students of marketing and merchandising. Mr. Roberts

242. **Foreign Trade.** II. 3 Hrs. Development of trade among nations, theories of trade, policies, physical factors, trends, barriers, adjustment of theory and facts. PR: Econ. 2 and consent of instructor. Mr. Dadisman

245. **Personnel Management.** II. 3H rs. A study of current human relations in industry against the historical background of relations between employer and employee from which have been conceived the principles which underlie the development of employer and employee interests. PR: Econ. 240. Mr. Shilland

251, 252. **Business and the State.** I, II. 2 Hrs. per semester. Government in its role of adviser and umpire; analysis of governmental policies and practices affecting business. PR: Econ. 1 and 2. Staff

257. **Problems of Small Business.** I. 2 Hrs. An analysis of the specific problem facing small businesses in our present-day American economy. A specialized management course designed for students who wish to prepare themselves for proprietorship of a small business. The treatment in this course is for those already in business as well as for potential owners and operators of a small business. PR: Open only to seniors and graduate students who are majors in business administration. Staff

270. **Public Relations.** II. 2 Hrs. Molding public opinion; establishing general prestige; developing internal public relations in industry; techniques of public relations. PR: Open only to seniors and graduate students who are majors in economics or business administration. Staff

English Language and Literature

Professors CROCKER, DRAPER, and SMITH; Associate Professors BISHOP (Adviser), BRAWNER, and CHAPPELL; Assistant Professors BATTLES, FOSTER, GAINER, PAGE, PETTIGREW, REED, and SAYRE; Instructors ALLEN, ANDERSON, ARMSTRONG, BEVINS, BLUMERT, BOARD, BRODERICK, CARROLL, HATFIELD, MAXWELL, MOCKLER, MONTGOMERY, MORGAN, and STURM

To be received as a major student in the Department of English the student must have credit for the following lower-division courses or their equivalent: English 3, 4, 5, and 6; English 13 or some other course in advanced composition—in all, 14 hours in addition to the general college requirement of 6 hours in English composition (English 1 and 2).

English 3 or English 4 (English 163 or English 164) is prerequisite to all advanced courses in English literature.

English 5 or 6 is prerequisite to all advanced courses in American literature.

A major student will usually be expected to complete at least 24 hours of upper-division courses in English. One course each in Shakespeare, Chaucer,

History of the English Language, and Bible literature or world literature is normally included in this 24-hour requirement.

The University language requirement will be the language requirement of the English department, i. e., 12 hours in foreign language in college or 2 units for entrance and 6 hours in the same language in college.

Six hours of English history, History 133 and 134 or their equivalent, are also usually required of major students.

Speech 3 or 11 is required of English majors, and a total of no less than 9 hours altogether should be offered in journalism, library science, and speech (9 hours in speech, or 6 hours in any one of the three).

Candidates for the degree of Master of Arts who have not taken English 230, 231, 234, 235 or their equivalent as undergraduates must include these courses in their graduate program. Courses 224 and 291 are also usually required of all English graduate majors.

Candidates for the degree of Master of Arts with major in English must have met the undergraduate requirement of 12 hours of college work in French, German, or Latin.

HONORS IN ENGLISH

Students enrolled in the Department of English, whether major students or not, who maintain an honor-point average of at least 2.0 during their junior and senior years and who complete at least 24 hours of upper-division work in English may qualify as honor students in English and receive a special departmental honor certificate upon graduation. For full information concerning the requirements for honors in English, students should consult the head of the department.

CERTIFICATION WITH ENGLISH AS A TEACHING FIELD

A major in English may meet the requirements for the A.B. degree and also the requirements of the State Board of Education for teachers' certification, with English and French, English and Latin, or English and speech as teaching fields, in four years of eight semesters, provided two years of high-school Latin or French have been offered for entrance credit. In lieu of two entrance credits, additional hours of college work in the languages are required for certification. Other combinations, such as English and social studies or English and physical education, sometimes require somewhat more than four years, and students who desire these combinations should consult the departmental adviser in planning their courses.

COURSES OF INSTRUCTION

Lower Division

1c. **English Composition.** I, II. 3 Hrs. Three class hours weekly. Required of all students who fail to pass the Freshman English placement test. Staff

1. **Composition and Rhetoric.** I. II. 3 Hrs. Primarily for freshmen. Required of all candidates for the Bachelor's degree in all the colleges. Not open to upperclassmen. Staff

2. **Composition and Rhetoric** I, II. 3 Hrs. Continuation of English 1. Primarily for freshmen. Required of all candidates for the Bachelor's degree in all colleges. Not open to upperclassmen. Staff

3. **English Literature.** I, II. 3 Hrs. Survey: study of English authors from Beowulf to Burns and readings from their works. PR: English 1 and 2 or a superior record in the Freshman English placement test. Open only to

lower-classmen. Upperclassmen may substitute English 163 for this course. Staff

4. **English Literature.** I, II. 3 Hrs. Survey: study of English authors from Robert Burns to the present and of readings from their works: PR: English 1 and 2 or a superior record in the Freshman English placement test. Open only to lowerclassmen. Upperclassmen may substitute English 164 for this course. Staff

5. **American Literature.** I, II. 3 Hrs. Survey: study of American authors with readings from their works to 1870. PR: English 1 and 2 or a superior record in the Freshman English placement test. Open to lowerclassmen. Upperclassmen may be admitted with the consent of instructor. Mr. Anderson and Miss Sayre

6. **American Literature.** I, II. 3 Hrs. Continuation of English 5. Mr. Anderson and Miss Sayre

13. **Expository Writing.** I. 2 Hrs. Not open to upperclassmen. PR: English 1 and 2. Staff

14. **Argumentative Writing.** II. 2 Hrs. Not open to upperclassmen. PR: English 1 and 2. Mr. Anderson

16. **Descriptive and Narrative Writing.** I, II. 2 Hrs. Not open to upperclassmen. PR: Either English 13 or a grade of at least B in English 2. Mrs. Reed

Upper Division

Credit for at least 9 hours of lower-division English is prerequisite to admission to any upper-division courses.

Sophomores should not register for upper-division courses without special permission of the head of the English department.

Upperclassmen who have failed to obtain credit for required lower-division courses must make special arrangement with the head of the English department to make up the missing credit.

111. **The Research Paper.** I, II. 3 Hrs. Mr. Anderson

115. **Advanced Composition: Creative Writing.** I, II. 2 Hrs. PR: Consent of instructor. Mrs. Reed

123. **Continental Influences on English Literature: Renaissance.** I. 2 Hrs. Mr. Battles

124. **Continental Influences on English Literature: The Romantic Period.** II. 2 Hrs. Mr. Battles

125. **Advanced Composition.** I. 2 Hrs. Designed particularly to meet the needs and interests of students in languages and literatures, social studies, and the arts. Mr. Gainer

126. **Advanced Composition.** II. 2 Hrs. Technical forms of writing designed particularly for students in sciences, Engineering, and Agriculture. Mr. Gainer

127. **The American Language.** II. 2 Hrs. Words and their ways in American speech. Mr. Chappell

128. **College Course in English Grammar.** I. 3 Hrs. Mr. Bishop

138. **English Literature 1660-1744.** I. 3 Hrs. Mr. Bishop and Mr. Crocker

139. **English Literature 1745-1798.** II. 3 Hrs. Mr. Bishop and Mr. Crocker

140. **Elizabethan Poetry and Prose.** I. 3 Hrs. Mr. Smith

141. **Literature of 17th Century.** II. 2 Hrs. Mr. Brawner

142. **Shakespeare.** I. 3 Hrs. Mr. Smith

160. **Contemporary Literature.** I. 2 Hrs. Mr. Smith

161. **Contemporary Literature.** II. 2 Hrs. Continuation of English 160. Mr. Smith

163. **Great Men of English Letters.** I. 3 Hrs. Study of English literature with special reference to the life, personality, ideas, and influence of a number of great English authors. May be substituted for English 3 but may not be elected by students who already have credit for English 3. Staff

164. **Great Men of English Letters.** II. Continuation of English 163. May be substituted for English 4 but may not be elected by students who already have credit for English 4. Staff
166. **American Fiction.** I. 3 Hrs. Mr. Brawner
171. **Folk Literature in West Virginia.** I. 2 Hrs. Introductory course in folk games, songs, ballads, and stories of the state. Mr. Chappell
173. **Poetry.** I. 2 Hrs. Mr. Brawner
175. **The Short Story.** I. 2 Hrs. Mr. Bishop
178. **Study of a Literary Type: Autobiography.** II. 2 Hrs. Miss Page
180. **Bible Literature: Old Testament.** I. 3 Hrs. Mr. Battles
181. **Bible Literature: The Apocrypha.** II. 3 Hrs. Mr. Battles
182. **Masterpieces of World Literature.** II. 3 Hrs. Mr. Crocker

Senior-Graduate Courses

Credit for English 1, 2, and 3 or their equivalent and for at least 3 hours of upper-division English is prerequisite to admission to courses listed below.

221. **Advanced Rhetoric** II. 2 Hrs. Mr. Gainer
224. **Literary Criticism.** II. 2 Hrs. Mr. Crocker
225. **Recent Literary Criticism.** I, II. 2 Hrs. Mr. Foster
228. **Advanced Grammar.** I. 3 Hrs. Mr. Bishop
230. **History of the English Language.** I. 3 Hrs. Mr. Chappell
231. **Old English.** I. 3 Hrs. Mr. Chappell
232. **Beowulf.** II. 3 Hrs. Mr. Chappell
234. **Chaucer.** II. 3 Hrs. Mr. Smith
235. **Shakespeare.** I. 3 Hrs. Mr. Draper
236. **Old English Poetry.** I. 3 Hrs. Mr. Chappell
237. **Metrical Romances.** II. 2 Hrs. Mr. Chappell
239. **Southern Writers.** II. 2 Hrs. Mr. Foster
240. **Special Topics in American Literature.** I, II. 2 Hrs. Miss Sayre
244. **Literature of the Sixteenth Century.** I. 3 Hrs. Mr. Draper
245. **Literature of the Seventeenth Century.** II. 3 Hrs. Mr. Draper
247. **Literature of the Eighteenth Century.** II. 3 Hrs. Mr. Draper
248. **Literature of the Eighteenth Century.** II. 3 Hrs. Mr. Draper
249. **The Romantic Movement.** I. 3 Hrs. Mr. Brawner
250. **American Romanticism** II. 3 Hrs. Mr. Brawner
251. **Victorian Literature.** I. 3 Hrs. Mr. Smith
252. **Modern English Literature. 1881-1918.** I. 3 Hrs. Mr. Crocker
253. **Pre-Shakespearian Drama.** I. 3 Hrs. Mr. Crocker
254. **Elizabethan Drama.** II. 3 Hrs. Mr. Crocker
255. **Restoration and Eighteenth-century Drama.** I. 3 Hrs. Mr. Crocker
256. **Modern English Drama.** II. 3 Hrs. Mr. Crocker
259. **Dramatic Art of Shakespeare.** II. 3 Hrs. Mr. Bishop
261. **The Technique of the Drama** I. 2 Hrs. Drama as a literary form; technique of the various types. Mr. Crocker
263. **Study of One Author.** I, II. 2 Hrs. Staff
264. **Spenser.** I, II. 2 Hrs. Mr. Chappell
265. **Pope.** I, II. 3 Hrs. Mr. Bishop
266. **Browning.** I, II. 3 Hrs. Mr. Smith
267. **Milton.** II. 3 Hrs. Mr. Gainer
270. **American Poetry.** II. 3 Hrs. Mr. Smith
271. **American Drama.** II. 2 Hrs. Mr. Smith
272. **Folk Literature.** II. 3 Hrs. Mr. Gainer
273. **The Folktale and Allied Forms** II. 3 Hrs. Mr. Chappell
274. **Study of Literature Type—The Lyric.** I, II. 2 Hrs. Mr. Draper
275. **The English Novel to the Time of Scott.** I. 3 Hrs. Mr. Bishop and Mr. Anderson
276. **The English Novel, 1832-1918.** II. 3 Hrs. Mr. Bishop and Mr. Anderson
277. **The Essay.** II. 3 Hrs. Mr. Brawner

278. **Tragedy.** II. 3 Hrs. The tragic spirit in epic poetry, fiction, and drama. Mr. Brawner

279. **Satire and Humor.** II. 3 Hrs. The comic spirit in English literature. Mr. Bishop

280. **The Modern Novel.** II. 2 Hrs. Mr. Bishop

291. **Introduction to Literary Research.** I, II. 2 or 3 Hrs. Mr. Draper

392. **Seminar.** I, II. 2 or 3 Hrs. Staff

Geology, Mineralogy, and Geography

Professors FRIDLEY and MARTENS; Associate Professor WELLS; Assistant Professor LUDLUM

Each student majoring in geology is required to present credit for Geology 266s or its equivalent . The following schedule is recommended:

BACHELOR OF SCIENCE IN GEOLOGY

Majors in Geology working toward the Bachelor of Science degree must have a minor in an allied science.

Freshman	*Hrs.*	*Sophomore*	*Hrs.*	*Junior*	*Hrs.*	*Senior*	*Hrs.*
Foreign lang.	6	Foreign lang.	6	Geol. 105	4	Upper-division	
English 1 and 2	6	Geol. 1 and 2	4	Geol. 161	3	courses in	
Mathematics 3	3	Geol. 3 and 4	4	Geol. 184	4	geology and	
Mathematics 4	3	Physics 1 and 3	4	Geol. 204	4	engineering	
Chem. 1 and 2	8	Physics 2 and 4	4	Chem. 105	4	including	
Mil. Sci. 1 and 2	4	C. E. 1	2	Chem. 106	5	Geol. 266s	
Phys. Educ. 1		Mil. Sci. 3 and 4	4	M. E. 20	3	and E.	
and 2	2	Electives (to		E. M. 106	1	M. 201	18 to 21
		complete gen-		Electives	6	Electives	12 to 14
		eral Arts &					
		Sciences re-					
		quirements)	6				
	32		34		34		32 to 34

BACHELOR OF ARTS IN GEOLOGY

The requirements for the degree of Bachelor of Arts in Geology are essentially the same as for the Bachelor of Science degree except that the minor subject must be in a related subject, and less course material in engineering is required. Only 128 hours are required for this degree.

SEQUENCES

Lower Division

Geology 1, 2, 3, and 4 give a general view of the subject.
Geology 1 and 111 introduce rocks and minerals and their uses.
Geology 7 and 109 or 116 and 108 is a combination for students of education.

COURSES OF INSTRUCTION

GEOLOGY AND MINERALOGY

Lower Division

1. **Physical Geology.** I, II. 3 Hrs. A scientific description of the composition and structure of the earth; the physical processes which change the surface of the earth. (Geology 1 must be accompanied by Geology 2 in order to meet the requirements for 4 hours of a laboratory science in physical geology.) Staff
2. **Physical Geology Laboratory.** I, II. 1 Hr. Accompanies Geology 1. Staff
3. **Historical Geology.** I, II. 3 Hrs. PR: Geol. 1. Evolution of the earth and its inhabitants. (Geology 3 must be accompanied by Geology 4 in order

to meet the requirements for four hours of a laboratory science in historical geology.) Mr. Wells

4. **Historical Geology Laboratory.** I, II. 1 Hr. Accompanies Geology 3. Mr. Wells

105. **Structural Geology.** I. 3 or 4 Hrs. Shape and position of rock masses in the earth's crust; mechanical principles underlying the various types of rock deformation; indication of the economic importance of deformed rock structures with respect to recovery of mineral products. PR: Geol. 1 and 3. Mr. Ludlum

108. **Natural Resources and Geology of West Virginia.** II. 3 Hrs. A summary of the geology of the state from a historical and economic standpoint. PR: Geol. 1 or 7. Staff

111. **Economic Geology: Nonmetallics.** I. 3 Hrs. Occurrence, formation, and use of nonmetallic mineral substances, including mineral fuels, building materials, chemicals, etc. PR: Geol. 1 and 2. Mr. Ludlum

112. **Economic Geology: Ore Deposits.** II. 3 Hrs. Mineral composition, geological features, and distribution of the deposits of the principal useful metals. PR: Geol. 1 and 2. Mr. Ludlum

127. **Map Interpretation.** I. 2 Hrs. Relation of earth structure and history to land forms as shown on topographic maps. PR: Geol. 2 and 3. Staff

128. **Map Interpretation.** II. 2 Hrs. Continuation of Geology 127. PR: Geol. 2 and 3. Staff

161. **Field Geology.** II. 3 Hrs. An introduction to actual field techniques utilized by the geologist in mapping and reporting on the geology of unknown regions. The Morgantown area is studied in detail. PR: Geol. 2 and 3 or equivalent. Staff

184. **Mineralogy.** I. 4 Hrs. The first one-third of the course deals with general principles of mineralogy and crystallography and the last two-thirds is a systematic description of the more important minerals. PR: One year each of chemistry and physics. Mr. Martens

204. **Invertebrate Paleontology.** I. 4 Hrs. Invertebrate fossils; their biologic classification, evolutionary development, and use in the correlation of strata. PR: Geol. 3. Mr. Wells

206. **Sedimentation.** II. 3 or 4 Hrs. Origin of the sedimentary rocks; the principles involved in interpretation of ancient geography, climates, animals and plants, i. e., the basic foundations for stratigraphy. Emphasis upon economically important sedimentary products. PR: Geol. 1 and 3. Mr. Ludlum

207. **Stratigraphy.** II. 4 Hrs. Distribution, age, and general character of the geologic formations of North America and their included forms of life. Changing structural features of the continent are noted by use of paleogeographic maps. PR: Geol. 3 and 204. Mr. Wells

208. **Geomorphology.** I. 3 Hrs. Study of the surface feature of the eastern United States. PR: Geol. 3. Mr. Fridley

209. **Geomorphology.** II. 3 Hrs. Continuation of Geology 208. Surface features of the western United States. PR: Geol. 3. Mr. Fridley

211. **Geology of Coal, Oil, and Gas.** II. 3 Hrs. Origin, geologic distribution, methods of exploration and exploitation, uses, and future reserves of coal, oil, and gas in the world, with special attention to the United States. PR: Geol. 3 and Chem. 106. Mr. Ludlum

266s. **Field Geology.** SI. 6 Hrs. Practical experience in detailed geological field procedures and mapping. Living expenses are in addition to tuition and must be paid on or before registering. PR: Geol. 3 and 161 (or their equivalents). Staff

285. **Microscopic Mineralogy.** II. 4 Hrs. Principles of optical mineralogy and practice in the use of the polarizing microscope in identification of minerals. Applications to various branches of geology and related sciences are stressed in accordance with the interest of the individual student. PR: Geol. 184. Mr. Martens

289. **Geologic Problems.** I, II. 2 to 4 Hrs. Specialized work for advanced students based upon original field and laboratory work or upon outstanding contributions to the literature. Consult departmental adviser before registering. Staff

290. **Geologic Problems.** I, II. 2 to 4 Hrs. Continuation of Geology 289. Staff

291, 292. **Seminar.** I, II. 1 Hr. Staff

Graduate Division

301. **Micropaleontology.** I. 4 Hrs. Identification of Foraminifera, Bryozoa, and Ostracoda with aid of the microscope. Emphasis upon classification, nomenclature, and use of paleontological literature. PR: Geol. 104. Mr. Wells

307. **Stratigraphy.** II. 4 Hrs. Distribution, age and general character of the geologic formations of North America, and their included forms of life. Changing structural features of the continent are noted by use of paleogeographic maps. PR: Geol. 3 and 104. Mr. Wells

310. **Advanced Economic Geology.** I. 3 Hrs. Occurrence, origin, and distribution of mineral products of economic value and the practical application of geologic principles. PR: Geol. 111 and 112. Staff

395, 396. **Special Topics.** I and II. 1 to 4 Hrs. per semester. Petrography of igneous rocks, sedimentary petrography, invertebrate paleontology, stratigraphy, economic geology, and geomorphology are suggested topics. Staff

397. 398. **Research.** I, II. 1 to 5 Hrs. Specialized work for advanced students based upon field or laboratory evidence and reported upon in candidacy for advanced degrees. Staff

GEOGRAPHY

Lower Division

7 or 107. **Introductory Geography.** I. 3 Hrs. Relationship between environment and forms of life; emphasis on physiography and climatology. Mr. Fridley

12. **Meteorology.** I, II. 3 Hrs. The physical processes underlying observed weather phenomena. Mr. Fridley

Upper Division

109. **Economic Geography.** II. 3 Hrs. Regional method of treating agricultural, industrial, and commercial development of each of the various countries of the world, and study of the environmental features which have contributed to the development. Mr. Fridley

116. **Geography of North America.** II. 3 Hrs. The geographic sections of the United States and Canada and a brief survey of each of the Central American republics. Mr. Fridley

Germanic Languages and Literatures

Assistant Professors ROESCH and LEMKE

The chief objective of the department is to enable the student to read thoughtful German without the aid of a dictionary. Of German 1, 2, 3, and 4, each is prerequisite to the next following, and the four combined are prerequisite to all other courses.

Students majoring in German are advised to base their schedules on upper-division courses from the following subjects, which are listed here in the order of their importance: German, education, English, European history, Latin, Romance languages, modern philosophy, and Greek. Those who are not planning to teach German may omit the courses in education, but the sequence of subjects, from the angle of their desirability for a major in German, remains the same.

COURSES OF INSTRUCTION[1]

Lower Division

1. **Elementary German.** I, II. 3 Hrs. Pronunciation, syntax, reading, composition. Staff
2. **Elementary German.** I, II. 3 Hrs. Staff
3. **Intermediate German.** I. 3 Hrs. Rapid reading of prose by modern authors, memorizing of poems, dictation, composition. Staff
4. **Intermediate German.** II. 3 Hrs. Continuation of German 3. Staff

Upper Division

105. **The German "Novelle".** I. 3 Hrs. Mr. Lemke
107. **Nineteenth Century Drama.** I. 3 Hrs. Critical study of selected dramas by Kleist, Grillparzer, Hebbel, Ludwig. Miss Roesch
108. **Nineteenth Century Drama.** II. 3 Hrs. Continuation of German 107. Miss Roesch
111. **Spoken German.** I. 3 Hrs. Practice in the speaking and writing of German. Miss Roesch
112. **Spoken German.** II. 3 Hrs. PR: one year of college German or two years of high-school German. Miss Roesch
121. **Scientific German.** I. 3 Hrs. Primarily for students in science courses. Mr. Lemke
122. **Scientific German.** II. 3 Hrs. Continuation of German 121. Mr. Lemke
131. **German Composition.** I. 1 Hr. Practice in the writing of German.
132. **German Composition.** II. 1 Hr. Practice in the writing of German.
136. **Introduction to Goethe.** II. 3 Hrs. Miss Roesch
161. **Lyric Poetry (1750-1840).** I. 3 Hrs. Mr. Lemke
162. **Lyric Poetry (1840-1930).** II. 3 Hrs. Mr. Lemke
†211. **Middle High German.** I. 1 Hr. PR: 12 hours of German from the upper division. Miss Roesch
†212. **Middle High German.** II. 1 Hr. PR: same as for German 211, and including it. Miss Roesch
241. **Faust, Part I.** I. 3 Hrs. Open to qualified undergraduates. Miss Roesch
242. **Faust, Part II.** II. 3 Hrs. PR. German 241. Miss Roesch
245. **History of German Literature, 1766-1870.** I. 3 Hrs.
246. **History of German Literature, 1870-1914.** II. 3 Hrs. Continuation of German 245.
272. **The Romantic Movement.** II. 3 Hrs. Mr. Lemke

History

Professors SUMMERS, AMBLER, ENNIS, and SHORTRIDGE; Associate Professors EASTON and KEEN; Instructor BARNS; Lecturers LAMBERT and SMITH

Before graduation history majors are required to complete 18 hours in upper-division courses, including History 276, introduction to historical research and bibliography. Six hours in political science and 6 hours in economics are also required in addition to the special requirements for the A. B. degree. Students who expect to major in history should complete the following subjects, or their equivalents, in their first and second years: English, 6 hours; French or German, 12 hours; history, 12 hours, which should include History 52 and 53 and may include one year's work in either Humanities or Social Sciences general courses; laboratory science, 8 hours; political science, 6 hours; and economics, 6 hours. In

[1]German 1, 2, 3, and 4 each is prerequisite to the next following, and the four combined are prerequisite to all other courses with the exception of German 111, 112, 121, and 122, for which German 1 and 2 are prerequisite.

planning work in history, students should consult the department in order that advanced courses may be properly correlated as well as suited to individual needs and tastes. One lower-division "year course" or equivalent in history is prerequisite for a major, but prospective majors are advised to take two such courses or History 52 and History 53 and one year of Humanities or Social Sciences general courses.

COURSES OF INSTRUCTION

Lower Division[1]

1. **European Civilization from the Fall of Rome to the Death of Louis XIV.** I, II. 3 Hrs. For Freshmen. Mr. Easton, Mr. Ennis, and Miss Smith
2. **European Civilization from the Treaty of Utrecht to the End of World War II.** I, II. 3 Hrs. For freshmen. Mr. Easton, Mr. Ennis and Miss Smith
52. **The Growth of the American Nation to 1865.** I, II. 3 Hrs. Primarily for sophomores. Mr. Barns, Mr. Keen, Mr. Lambert, and Mr. Summers
53. **The Making of Modern America, 1865 to the Present.** I, II. 3 Hrs. Primarily for sophomores. Mr. Barns, Mr. Keen, Mr. Lambert, and Mr. Summers

Upper Division

101. **History of Ancient Times from the Stone Age to the Fall of Rome.** I. 3 Hrs. Mr. Easton
106. **Medieval Europe from the Fall of Rome to the Renaissance.** I. 3 Hrs. PR: one college course in European history. Mr. Easton
†107. **The French Revolution.** I. 3 Hrs. Mr. Easton
†108. **The Napoleonic Era.** II. 3 Hrs. PR: History 107. Mr. Easton
†109. **Social and Cultural History of Europe in the Nineteenth Century.** I. 3 Hrs. Mr. Eatosn
†110. **Social and Cultural History of Europe in the Twentieth Century.** II. 3 Hrs. Mr. Easton
†114. **The Renaissance and the Reformation.** II. 3 Hrs. Mr. Easton
133. **British Civilization to 1603.** I. 3 Hrs. Mr. Shortridge
134. **British Civilization since 1603.** II. 3 Hrs. Continuation of History 133. Mr. Shortridge
150. **West Virginia.** I, II. 3 Hrs. Mr. Ambler
†151. **American Colonial History.** I or II. 3 Hrs. Mr. Barns
164. **History of Eastern Asia.** II. 3 Hrs. Mr. Ennis
180. **American Economic History.** I. 3 Hrs. Mr. Barns
181. **The American Labor Movement.** II. 3 Hrs. Mr. Barns
†182. **History of American Agriculture.** I or II. 3 Hrs. Mr. Barns
†217. **Social and Economic History of the United States.** I. 3 Hrs. Mr. Ambler
218. **The Second World War and its Causes from the Manchurian Crisis of 1931 to the Downfall of Germany.** II. 3 Hrs. Mr. Easton
219. **History of Russia from the Varangians to the Bolsheviks.** I. 3 Hrs. Mr. Easton
220. **Latin-American History: The Colonial Period and the Wars of Independence.** I. 3 Hrs. Mr. Keen
221. **Latin-American History: The National Period.** II. 3 Hrs. Mr. Keen
†231. **The British Empire.** I. 3 Hrs. Mr. Shortridge
†232. **Canada.** II. 3 Hrs. Mr. Shortridge

[1]All first and second-year courses are offered as lower-division "year courses." These courses run through the year, but in no case is the first half-year a prerequisite for the second half. For example, History 1 is not a prerequisite for History 2. History 1 and History 2 make up the introductory first year in history. History 52 and 53 are primarily for sophomores. A freshman should not take more than one "year course" at a time.

†233. Stuart England. I. 3 Hrs. Mr. Shortridge
†234. Recent Britain. II. 3 Hrs. Mr. Shortridge
241. Europe from Sedan to Versailles. I. 3 Hrs. Mr. Ennis
242. Europe from Versailles to Nuremberg. II. 3 Hrs. Mr. Ennis
†249. The Westward Movement to 1820. I or II. 3 Hrs. Mr. Ambler
†254. Trans-Mississippi West. I or II. 3 Hrs. Mr. Ambler
255. History of Education in West Virginia. I, II. 3 Hrs.
†256. The Jacksonian Era. II. 3 Hrs. Mr. Barns
257. The Ante-bellum South and the War of Secession. I. 3 Hrs. Mr. Summers
258. Reconstruction and National Development. 1865-1898. I. 3 Hrs. Mr. Ambler
259. Recent American History. II. 3 Hrs. Mr. Ambler
260. American Foreign Policy and Diplomacy. 1776-1898. I. 3 Hrs. PR: History 52 or equivalent. Mr. Keen
261. American Foreign Policy and Diplomacy. 1898-1945. II. 3 Hrs. PR: History 53 or equivalent. Mr. Keen
262. Problems of the Pacific. I. 3 Hrs. Mr. Ennis
†263. Anglo-American Diplomatic Relations. I. 3 Hrs. Mr. Keen
†264. American Policy in Latin-American Relations. II. 3 Hrs. Mr. Keen
†265. American Constitutional Development to 1860. I. 3 Hrs. PR: History 52 and 53 or equivalent. Staff
266. American Constitutional Development since 1860. II. 3 Hrs. Continuation of History 265. Mr. Summers
†271. Problems of Recent European History. I or II. 3 Hrs. Mr. Easton
276. Introduction to Historical Research and Bibliography. I, II. 3 Hrs. This course is prescribed in the fourth year for all history majors. Mr. Summers

Seminars[1]

301, 302. Thesis. I, II. 2 or 3 Hrs. each semester. Staff
303, 304. Research. I, II. 6 Hrs. each semester. Staff
†320. Social and Political Thought of Latin America. I or II. 3 Hrs. Mr. Keen
†321. Contemporary Latin America. I or II. 3 Hrs. Mr. Keen
†349, 350. Problems in Local and Regional History. I, II. 3 Hrs. each semester. Mr. Ambler
†351. American Colonial Institutions I or II. 3 Hrs. Mr. Barns
†360. Rise of Nationalism in Asia. I or II. 3 Hrs. Mr. Ennis
†361. Contributions of Asia to Western Civilization. I or II. 3 Hrs. Mr. Ennis
†378. Historians of the United States. I or II. 3 Hrs. Staff
†379. Great Historians of Europe. I or II. 3 Hrs. Staff
†384, 385. Problems in British Imperial History. I, II. 3 Hrs. each semester. Mr. Shortridge
†389. Problems in Revolutionary Europe. 1763-1815. I or II. 3 Hrs. Mr. Easton
†390. Problems in European Diplomacy. I or II. 3 Hrs. Mr. Easton
†391. German Ideology from Herder to Hitler. I or II. 3 Hrs. Mr. Easton

Home Economics

Courses in this subject are offered in the College of Arts and Sciences and in the College of Agriculture, Forestry, and Home Economics.

Students in the College of Arts and Sciences who select home economics as

†Not offered in 1948-49.
[1]Seminar courses are for history and social-science majors and admission is only by permission of instructors in charge and should be by their request.

a major must complete the lower-division requirements with the following changes (see page 123).

(b) Science: Chemistry, biology, physics, psychology

(f) Electives include Home Economics 1, 2, 3, 4, 18, 33, 50

In the upper division a minimum of 18 hours should be elected (with the help of the adviser) from upper-division courses in home economics. The total hours in home economics must not exceed 36. Further electives should be chosen from the biological and social sciences.

Attention is called to the fact that students who are not interested in the physical and biological sciences may elect Home Economics 1, 2, 3, 4, 18, 33, 50, 134, or 135, 138, 160, 161, and 240.

Students who are preparing to teach home economics must meet the requirements of the State Board of Education and of the College of Education.

The head of the Division of Home Economics in the College of Agriculture is also a member of the College of Education and is the adviser for students wishing to meet the requirements for a high school certificate to teach home economics.

Library Science

Assistant Professor REESE

The courses in library science are designed to meet the needs of students preparing to qualify for State certification as teacher-librarians in the public schools. However, certain courses will be of particular value to all students in helping them to find library materials for their class work. The courses "Children's Literature and Story Telling" and "Reference and Bibliography" are of value to all prospective teachers.

No student should select Library Science as a major or teaching field unless he or she has the ability to work well with children and young people and is easily and quickly adapted to new situations. Genuine enthusiasm for and broad knowledge of books are desirable.

COURSES OF INSTRUCTION

Lower Division

1. **Teaching the Use of the Library.** I, II. 2 Hrs. Planned to give a working knowledge of the University Library as well as of school libraries. Basic reference materials are considered, together with simple bibliography making. A general course, useful to any student in the University.

Upper Division

101. **Reference and Bibliography.** I. 3 Hrs. Basic reference books, dictionaries, encyclopedias, indexes, year books, and other reference material are studied and evaluated, with practice in detailed bibliography making.
102. **Cataloguing and Classification.** II. 3 Hrs. Fundamental principles of cataloguing and classification, with practical experience in handling all types of books. Problems of teacher-librarians receive special attention.
103. **Children's Literature and Story Telling.** I. 3 Hrs. Study, reading, selection, and history of children's literature, with practice in story telling.
104. **Book Selection.** II. 2 Hrs. Principles of book selection for various types of libraries and readers with emphasis on the reading interests and

†Not offered in 1948-49.

habits of adults. Each student is required to read representative titles in every field of literature.

105. **Adolescent Literature.** II. 2 Hrs. Principles and methods of book selection for junior and senior high-school libraries and the necessary bibliographic tools.

106. **History of Books and Libraries.** II. 3 Hrs. Survey course, including the development of writing, the history of writing materials, the development of the book from early manuscript form, history of printing, printers, illustrators, bindings, and libraries.

107. **Administration of School Libraries.** I. 3 Hrs. Methods of planning, equipping and organizing a library, together with technical and mechanical processes involved.

108. **Library Practice.** I, II. 3 Hrs. A field course designed to give the student experience in meeting library conditions and problems as they exist and arise in actual practice in school libraries.

Mathematics

Professors REYNOLDS and TURNER; Associate Professors DAVIS, VEHSE, and STEWART; Assistant Professors COLE, VEST, and CUNNINGHAM; Instructors MURPHY, PETERS, and DAVIS

The requirements for the major in mathematics are 12 hours in mathematics beyond the calculus including courses 240, 241, and 242.

COURSES SUGGESTED FOR PROSPECTIVE MAJORS IN MATHEMATICS

FIRST YEAR

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
English 1	3	English 2	3
French or German	3	French or German	3
Mathematics 3 (or 2)	3	Mathematics 5 (or 3 & 4)	4
Mathematics 4 (or 7)	3	(or 6)	

Military science and physical education when required.

SECOND YEAR

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
French or German	3	French or German	3
Mathematics 107 (or 5)	4	Mathematics 108 (or 107)	4
Physics 105 & 107	5	Physics 106 & 108	5

Electives or requirements for teacher's certificate.

THIRD AND FOURTH YEARS

Mathematics 107 and 108 if not previously completed.

Mathematics 240, 241, and either 243, 244, or 245.

Electives or requirements for teacher's certificate.

COURSES OF INSTRUCTION

Lower Division

2. **Algebra.** I, II. 3 Hrs. PR: 1 unit of algebra and 1 unit of plane geometry. Staff

3. **College Algebra.** I, II. 3 Hrs. PR: 1½ units of algebra or Mathematics 2, and 1 unit of plane geometry. Staff

4. **Plane Trigonometry.** I, II. 3 Hrs. PR: 1½ units of algebra and 1 unit of plane geometry. Staff

5. **Analytic Geometry.** I, II. 4 Hrs. PR: college algebra and plane trigonometry. Staff

7. **Solid Geometry.** I, II. 3 Hrs. If offered to remove entrance conditions, ½ unit. PR: plane geometry. Staff

10. **Plane Trigonometry.** II. 3 Hrs. PR: 1 unit of algebra and 1 unit of plane geometry. Staff

Upper Division

106. **Descriptive Astronomy.** II. 3 Hrs. PR: Math. 5. Mr. Reynolds
107 or 207. **Differential and Integral Calculus.** I, II. 4 Hrs. PR: Mathematics 5. Staff
108 or 208. **Differential and Integral Calculus.** I, II. 4 Hrs. Continuation of Mathematics 107. Staff
128. **Mathematical Theory of Investment.** II. 3 Hrs. Primarily for students in economics and sociology. PR: Mathematics 3. Mr. Reynolds
130. **Elementary Theory of Mathematical Statistics.** II. 3 Hrs. PR: Mathematics 107. Mr. Reynolds
240. **Differential Equations.** I. 3 Hrs. PR: Mathematics 108. Mr. Davis
241. **Theory of Determinants and Analytic Geometry of Space.** I. 3 Hrs. PR: Mathematics 108. Miss Turner
242. **Advanced Calculus.** II. 3 Hrs. PR: Mathematics 108. Mr. Vehse
243. **Projective Geometry.** II. 3 Hrs. PR: Mathematics 241. Miss Turner
244. **Theory of Equations.** II. 3 Hrs. PR: Mathematics 108. Mr. Reynolds
245. **Vector Analysis.** II. 3 Hrs. PR: Math. 240 and 242. Mr. Stewart
246. **Introduction to Algebraic Theory.** I. 3 Hrs. PR: Mathematics 108. Staff
247. **Theory of Numbers.** II. 2 Hrs. PR: Mathematics 5. Mr. Vehse
248. **History of Mathematics.** II. 2 Hrs. PR: Math. 5. Mr. Reynolds
249. **History of Elementary Modern Mathematics.** II. 2 Hrs. PR: Mathematics 5. Mr. Reynolds
251, 252. **Advanced Calculus.** I and II. 3 Hrs. per semester. PR: Mathematics 108. Mr. Stewart
253, 254. **Advanced Course in Applied Mathematics.** I and II. 3 Hrs. per semester. PR: Mathematics 108. Mr. Vest
255. **Mathematical Astronomy.** II. 3 Hrs. PR: Mathematics 106 and 240. Mr. Reynolds
257. **Fourier Series and Partial Differential Equations.** I. 3 Hrs. PR: Mathematics 240 and 242 or 251. Mr. Vest
258. **Operational Methods in Partial Differential Equations.** II. 3 Hrs. PR: Mathematics 240 and 242 or 251. Mr. Vest
360, 361. **Differential Geometry and Theory of Surfaces.** I and II. 3 Hrs. per semester. PR: Math. 240, 241, 242, and 243. Mr. Davis
362, 363. **Modern Algebra.** I and II. 3 Hrs. per semester. PR: Mathematics 242 and 243. Mr. Reynolds
364, 365. **Introduction to the Theory of Functions of a Complex Variable.** I and II. 3 Hrs. per semester. PR: Mathematics 240, 242, and 243. Mr. Vehse
366, 367. **Higher Plane Curves.** I and II. 3 Hrs. per semester. PR: Mathematics 243. Miss Turner
370, 371. **Theoretical Mechanics.** I and II. 3 Hrs. per semester. PR: Mathematics 240 and Physics 232. Mr. Vehse
372, 373. **Line Complexes and Cremona Transformations.** I and II. 3 Hrs. per semester. PR: Mathematics 243. Mr. Davis
374, 375. **Algebraic Surfaces.** I and II. 3 Hrs. per semester. PR: Mathematics 367. Miss Turner
376, 377. **Theory of Functions of a Real Variable.** I and II. 3 Hrs. per semester. PR: Mathematics 365. Mr. Reynolds
390, 391. **Seminar.** I and II. 1 or 2 Hrs. per semester. Staff

Philosophy and Psychology

Professors WINTER and STALNAKER; Associate Professors CRESSWELL, CURTIS, and MINOR

There is such wide diversity in the preparation, needs and aims of individual students that the department cannot lay down inflexible rules with regard to sequence of courses.

Introduction to Psychology (Psychology 1) or General Psychology (Psychology 3 and 4) is prerequisite to all other courses in the department. The upper-division courses are arranged in the order best suited to a progressive development in the fields of psychology and philosophy respectively.

Majors. Students who desire to do their major work in this department should consult with the head of the department before making their decision.

There are various fields of work open to those who major in either philosophy or psychology, some of which are as follows:

Psychology Majors:

1. Teaching psychology in university, college, or normal school.
2. Clinical work in public schools, hospitals, or social service.
3. Vocational guidance.
4. Personnel work in industry.
5. Preparation for certain phases of psychiatry.
6. Consulting psychologist.

Philosophy Majors:

1. Teaching philosophy in university, college, seminary, or normal school.
2. The ministry.
3. General culture for those not planning to undertake a specific type of work.

A major includes at least 24 hours of upper-division work in the department. Students may major in either philosophy or psychology. Students majoring in either of these branches will include at least one course in the other.

The sequence of courses for each major will be arranged so as to give the student the best foundation for the type of work he wishes to pursue.

Related Courses: Various departments offer courses of special value to students of philosophy and psychology. Following is a list of these courses:

For students in psychology: zoology; physiology; neurology; genetics; sociology; education; political science; and economics.

For students in philosophy: classical civilization (Greek life and thought); ancient or medieval history, or both; sociology; at least 12 hours in one of the sciences, or mathematics.

Students whose work shows a marked deficiency in English will be required to take a course in advanced composition.

Majors who look forward to teaching philosophy or psychology should plan to secure at least a Master's degree before applying for a teaching position.

Students who expect to continue their study of philosophy or psychology in a graduate school, either here or elsewhere, are advised to take at least 12 hours of both German and French.

COURSES OF INSTRUCTION

PSYCHOLOGY

Lower Division

1. **Introduction to Psychology.** I, II. 3 Hrs. Not open to freshmen. This course is designed to familiarize the student wth the principal phenomena of mental life, and is prerequisite to all other courses in psychology and philosophy except for those who take Psychology 3 and 4. Mr. Winter and Miss Stalnaker

3. **General Psychology.** I. 4 Hrs. Open to freshmen. Three hours of lecture and quiz and two hours of laboratory per week. Mr. Curtis and Staff

4. **General Psychology.** II. 4 Hrs. PR: Psychology 3. Continuation of Psychology 3. Mr. Curtis and Staff

110. **Applied Psychology.** II. 3 Hrs. A study of the application of psychology to medicine and law. PR: Psychology 1 (or 3 and 4). Mr. Winter

Upper Division

115. **Psychology of Management.** I. 3 Hrs. PR: Psychology 1 (or Psychology 3 and 4). Mr. Curtis

116. **Social Psychology.** I. 3 Hrs. PR: Psychology 1 (or 3 and 4). Mr. Winter

122. **Child Psychology.** II. 3 Hrs. PR: Psychology 1 (or 3 and 4). Miss Stalnaker

125. **Mental Hygiene.** I. 3 Hrs. PR: Psychology 1 (or 3 and 4). Miss Stalnaker

132. **Psychology of Advertising and Industry.** II. 3 Hrs. PR: Psychology 1 (or 3 and 4). Mr. Curtis

219. **Clinical Psychology.** II. 3 Hrs. PR: Psychology 1 (or 3 and 4), 122, and 224. Miss Stalnaker

224. **Mental Measurement.** I. 3 Hrs. PR: Psychology 1 (or 3 and 4). Miss Stalnaker

226. **Advanced Experimental Psychology.** I. 2 Hrs. Students in this course will be given individual problems for experimentation. PR: Psychology 3, 4, and 224. Mr. Curtis

228. **Personnel Psychology.** I. 3 Hrs. PR: Psychology 1 (or 3 and 4), 219, and 224. Miss Stalnaker

229. **Abnormal Psychology.** II. 3 Hrs. PR: Psychology 1 (or 3 and 4), and 116. Miss Stalnaker

230. **Advanced Psychology.** II. 3 Hrs. PR: Psychology 1 (or 3 and 4), and one course in philosophy. Mr. Winter

234. **Problems in Child Psychology.** II. 3 Hrs. Students in this course will be assigned individual problems in child behavior. PR: Psychology 1 (or 3 and 4), and 122. Miss Stalnaker

240. **History of Psychology.** II. 2 Hrs. PR: Psychology 1 (or 3 and 4), and two courses in philosophy. Mr. Winter

245. **Seminar.** I. 2 Hrs. A critical study of the current literature of psychology. PR: Psychology 1 (or 3 and 4) and 116. Mr. Winter

301, 302. **Special Problems in Psychological Research.** I and II. 2 to 4 Hrs. Staff

PHILOSOPHY

Lower Division

4. **Introduction to Philosophy.** I, II. 3 Hrs. PR: Psychology 1 (or 3 and 4). Staff

11. **Ethics.** I. 3 Hrs. PR: Psychology 1 (or 3 and 4). Mr. Minor

Upper Division

106. **Logic.** I. 3 Hrs. PR: Psychology 1 (or 3 and 4), Philosophy 4. Mr. Cresswell

112. **History of Ancient and Medieval Philosophy.** I. 3 Hrs. PR: Psychology 1 (or 3 and 4), and Philosophy 4. Mr. Cresswell

113. **History of Modern Philosophy.** II. 3 Hrs. Continuation of Philosophy 112, ending with German Idealism. PR: Psychology 1 (or 3 and 4), and Philosophy 4. Mr. Cresswell

114. **Contemporary Philosophy.** II. 3 Hrs. PR: Psychology 1 (or 3 and 4), Philosophy 4 and 3 hours in another philosophy course. Mr. Minor

120. **The Philosophy of Plato.** I. 3 Hrs. PR: Psychology 1 (or 3 and 4), Philosophy 4 and 3 hours in another philosophy course, preferably Philosophy 112. Mr. Cresswell

208. **Philosophy of Religion.** II. 3 Hrs. PR: Psychology 1 (or 3 and 4), Philosophy 4 and 3 hours in another philosophy course. Mr. Minor

212. **Seminar in Medieval Philosophy.** II. 3 Hrs. Medieval culture with particular reference to Thomas Aquinas. PR: Psychology 1 (or 3 and 4), Philosophy 4, 112, 113, and 106. Mr. Cresswell

216. **Contemporary Political Philosophy.** II. 3 Hrs. PR: Psychology 1 (or 3 and 4), and Philosophy 4. Mr. Cresswell

217. **Seminar in Metaphysics.** I. 2 Hrs. Critical study of a selected system of thought. PR: Psychology 1 (or 3 and 4), Philosophy 4, 112, 113, and 106. Mr. Cresswell

218. **Aesthetics.** II. 3 Hrs. PR: Psychology 1 (or 3 and 4), Philosophy 4, and 3 hours in another philosophy course. Mr. Minor

Physics

Professors COLWELL, MOLBY, and FORD; Associate Professor THOMAS; Instructors BRYAN and BAILEY

The various courses offered in physics are designed to meet the needs of the students in the College of Arts and Sciences, Agriculture, and Engineering, the School of Music, and the School of Medicine. All the courses are divided into lower and upper divisions. Majors in physics or mathematics will choose courses from the upper group at the beginning of the third year.

COURSES SUGGESTED FOR PHYSICS MAJORS

FIRST YEAR—English, algebra, trigonometry, introductory physics, French, analytical geometry, some required subjects.

SECOND YEAR—calculus, problems in physics, German, general physical laboratory or chemistry (or radio or photography), speech, some required subjects.

THIRD YEAR—light, electrical measurements, advanced radio, differential equations, German, some required subjects.

FOURTH YEAR—modern electrical theory or electricity and magnetism, theoretical mechanics, vector analysis, intermediate physical laboratory.

Lower Division

1. **Introductory Physics.** I. 3 Hrs. Primarily for freshmen. Required of all agricultural students and all students in the School of Medicine. Must be accompanied by Physics 3. Takes up mechanics, sound, and heat. PR: plane geometry and algebra. Mr. Colwell and Mr. Thomas

2. **Introductory Physics.** II. 3 Hrs. Primarily for freshmen. Must be accompanied by Physics 4. Includes electricity, magnetism, and light. PR: Physics 1. Mr. Colwell and Mr. Thomas

3, 4. **Introductory Physical Laboratory.** I and II. 1 Hr. per semester. Primarily for freshmen. Accompanies and is required of all students who take Physics 1 and 2. Mr. Molby and Staff

17. **General Laboratory.** I, II. 2 Hrs. Primarily for sophomores and juniors. This course is designed to meet the needs of students who desire more laboratory work than that offered in Physics 3 and 4. PR: Physics 3 and 4. Mr. Molby

Upper Division

105. **General Physics.** I, II. 4 Hrs. Required of all candidates for engineering degrees and recommended for all students who major in mathematics. Not open to students who have credit for Physics 1. Physics 107 must accompany. Comprises mechanics, sound, and heat. PR: trigonometry and analytical geometry. Mr. Ford and Mr. Thomas

105A. **General Physics.** II. 4 Hrs. A repeat course for those who have failed in Physics 105.

106. **General Physics.** II. 4 Hrs. Continuation of Physics 105. Not open to students who have credit in Physics 1 and 2. Covers light, electricity, and magnetism. Physics 108 must accompany. Mr. Ford and Mr. Thomas

107, 108. **General Physics Laboratory.** I and II. 1 Hr. per semester. A companion course for Physics 105 and 106. Mr. Molby and Staff

109, 110. **A Problem Course in General Physics.** I and II. 2 Hrs. per semester. Open to students who have taken Physics 1, 2, 3, and 4, or equivalent; not open to students who have taken Physics 105, 106, 107, and 108. Mr. Thomas

113, 114. **Introductory Radio.** I, II. 3 Hrs. PR: Physics 1, 2, 3, and 4, or equivalent. Mr. Thomas

116, 216. **Photography.** II. 3 Hrs. For science majors. Mr. Molby

221. **Light.** I. 3 Hrs. Lectures and laboratory work, designed to meet the needs of students in general biology, chemistry, and medicine. Graduate credit will be allowed to those who are not majoring in Physics. PR: Physics 1, 2, 3, 4, and trigonometry, or Physics 105, 106, 107, and 108. Mr. Molby

225, 226. **Introduction to Modern Physics.** I and II. 3 Hrs. per semester. Especially for students majoring in the natural sciences. Open to all seniors. PR: Physics 1, 2, 3, and 4, or 105, 106, 107, and 108, and Mathematics 3 and 4, or equivalent. Mr. Ford

231, 232. **Theoretical Mechanics.** I and II. 3 Hrs. per semester. Open to seniors. PR: Physics 1, 2, 3, and 4, or 105, 106, 107, and 108, and integral calculus. Mr. Colwell

233, 234. **Introductory Electricity and Magnetism.** I, II. 3 Hrs. Open to seniors. PR: Physics 105, 106, 107, and 108, and integral calculus. Mr. Thomas

241, 243, 245, 247. **Physics Seminar.** I. 1 Hr. Open to seniors and graduates. Discussion of modern research in Physics. Mr. Colwell

242, 244, 246, 248. **Physics Seminar.** II. 1 Hr. Similar to Physics 241. Mr. Colwell

249, 250. **Intermediate Laboratory and Special Topics.** I and II. 2 to 4 Hrs. per semester. Open to seniors who major in physics. PR: Physics 105, 106, 107, and 108, and calculus. Mr. Colwell and Mr. Ford

261. **Matter and Its Constituents.** I, II. 2 Hrs. per semester. Mr. Colwell

Graduate Division

381, 382. **Physical Optics.** I, II. 3 Hrs. each semester. Mr. Molby

383, 384. **The Kinetic Theory of Gases and Molecular Physics.** I, II. 3 Hrs. PR: Physics 1, 2, 3, and 4, or Physics 105, 106, 107, and 108, and integral calculus. Mr. Thomas

385, 386. **Quantum Mechanics.** I and II. 3 Hrs. per semester. Mr. Thomas

387, 388. **The Differential Equations of Physics.** I and II. 3 Hrs. per semester. Mr. Thomas

391, 392. **Advanced Electricity and Magnetism.** I and II. 3 Hrs. per semester. Mr. Colwell

397, 398. **Research.** I and II. 4 to 6 Hrs. per semester. Mr. Colwell and Staff

Political Science

Professor FRASURE; Associate Professor STURM; Instructors ROSS, WHITE, and MANN

Students who expect to select political science as their major subject should, while in the lower division, receive credit for Political Science 5 and 6 (106), History 1, 2, 52, 53, and Economics 1 and 2 or Sociology 1. Humanities 1, 2, may be substituted for History 1, 2. Political Science 5 and 6 (106) constitute the basic work in this department and they, or their equivalent, are prerequisite to

all courses in the upper division. The major requirement is 18 hours in upper-division courses. There should be a first minor of 12 hours in upper-division courses in history or economics and a second minor of 6 hours in upper-division courses in the other subject. With the approval of the departmental adviser, part of the required work in the major may be taken in the College of Law.

COURSES SUGGESTED FOR POLITICAL-SCIENCE MAJORS

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	Political Sci. 5	3	Political Sci. 6	3
Science	4	Science	4	French or German	3	French or German	3
French or German	3	French or German	3	History 52	3	History 53	3
History 1 or Humanities 1	3 4	History 2 or Humanities 2	3 4	Economics 1	3	Economics 2	3
Mil. sci.	1	Mil. sci.	1	Psychology 1 or Sociology 1	3	Philosophy 4	3
Physical educ.	1	Physical educ.	1	Mil. sci. or Physical educ.	2 1	Mil. sci. or Physical educ.	2 1
				Elective	2	Elective	2
	14 to 16		14 to 16		18 to 19		18 to 19

COURSES OF INSTRUCTION[1]

Lower Division[2]

5. **The Principles and Practices of Government: The American Federal System.** I, II. 3 Hrs. Primarily for sophomores. Staff
6. **(106). American State and Local Government.** I, II. 3 Hrs. Staff

Upper Division

104. **Contemporary European Political Institutions.** I. 3 Hrs. Mr. Ross
107. **American City Government.** II. 3 Hrs. Mr. Sturm
200. **American Political Institutions.** I. 3 Hrs. Mr. Sturm
202. **Political Parties and Public Opinion.** I. 3 Hrs. Mr. Ross
207. **The Administrative Process.** I. 3 Hrs. Mr. Sturm
208. **The Administrative Process.** II. 3 Hrs. Continuation of Course 207. Mr. Sturm
209. **The Legislative Process.** I. 3 Hrs. Mr. Sturm
210. **British Government and Practical Politics.** II. 3 Hrs. Mr. Frasure
213. **Modern Dictatorships.** I. 2 or 3 Hrs. Mr. Frasure
216. **Comparative Political Institutions.** II. 3 Hrs. Mr. Frasure
219. **History of Political Thought: Plato to Machiavelli.** I. 3 Hrs. Required of majors. Mr. Sturm
220. **History of Political Thought: Machiavelli to the Present.** II. 3 Hrs. Required of majors. Mr. Sturm
221. **Recent and Contemporary Political Thought.** II. 3 Hrs. Mr. Sturm
222. **American Constitutional Principles.** II. 3 Hrs. Mr. White
223. **International Law.** I. 3 Hrs. Mr. White
260. **International Relations.** I. 3 Hrs. Mr. Frasure
261. **International Relations.** II. 3 Hrs. (Continuation of 260.) Mr. Frasure

Graduate Division

301. **Methods of Research in Political Science.** I. 2 to 4 Hrs. Mr. Frasure
302. **Methods of Research in Political Science.** II. 2 to 4 Hrs. Mr. Frasure
303. **Selected Problems in International Relations.** I. 2 to 4 Hrs. Mr. Frasure
304. **Selected Problems in International Relations.** II. 2 to 4 Hrs. Mr. Frasure

[1]Regular elective for Arts and Science students.
[2]These courses are prerequisite to all upper-division work in the department

307. Selected Problems in State and Local Government. I. 2-4 Hrs. Mr. Sturm
308. Selected Problems in State and Local Government. II. 2-4 Hrs. Mr. Sturm
309. Selected Problems in Public Administration. I. 2-4 Hrs. Mr. Sturm
310. Selected Problems in Public Administration. II. 2-4 Hrs. Mr. Sturm
360. Thesis. I and II. 2 to 4 Hrs. Mr. Frasure and Mr. Sturm

Romance Languages and Literatures

Professors STATHERS, DARBY, and SPIKER; Associate Professors MITRANI, ASHBURN, and MANNING; Assistant Professor MCBRIDE; Instructors SINGER, WADE, and HERRERA

Courses 1 and 2 or two years of high-school credit will be required for entrance to courses 5, 6, 103, 104, 107, and 108. Usually students who have had two years' study of the language in high school should take courses 5 and 6. Students who have done three years of work in high school should take courses 107 and 108.

Prospective major students, and students who expect to do more advanced work in language, should not take more than 6 hours in courses 5, 6, 7, and 8.

Students whose grades have consistently fallen below B in language work in the lower division should not select Romance languages as a major subject.

No student who has not completed French 109, 110, 115, 116, and 231 or Spanish 109, 110, 211, 212, 221, and 222 will be recommended as a teacher of these subjects.

In order to be recommended by this Department for the degree of Bachelor of Arts a student must have completed, in addition to special requirements for the A. B. degree, one of the following combinations:

PROGRAM FOR MAJOR STUDENTS

NOTE: Credit hours are shown in parentheses after course designations.

FRENCH: French 109, 110, 115, 116, 221, and 222 (3 each); 231 (2); Spanish (6 to 12).

SPANISH: Spanish 109, 110, 211, 212, 221, and 222 (3 each); French (9 to 12).

SUGGESTED DISTRIBUTION OF COURSES

FIRST YEAR

	Hrs.
One Romance language	6
English 1 and 2	6
Laboratory science	8
Military science (when required)	2
Electives	8 to 10
	32

SECOND YEAR

	Hrs.
Two Romance languages (6 hrs each)	12
Military science (when required)	2
Electives and lower-division preparation for minor subjects.	18 to 20
	32

THIRD YEAR

	Hrs.
French or Spanish 109 and 110 (if not completed in second year)	6
French 115 and 116 or Spanish 211 and 212	6
Minor subject and electives	20
	32

FOURTH YEAR

	Hrs.
French or Spanish 221 and 222	6
French 231 or elective in Spanish	2
Minor subject and electives	24
	32

COURSES OF INSTRUCTION

FRENCH

Lower Division

1. Elementary French. I, II. 3 Hrs. Staff
2. Intermediate French. I, II. 3 Hrs. Staff
5. Contemporary Fiction. I. 3 Hrs. Staff
6. Contemorary Drama. II. 3 Hrs. Staff

Upper Division

103. Elementary Conversation. I. 3 Hrs. PR: 6 hours of French, or equivalent. Mr. Stathers
104. La Langue Pratique. II. 3 Hrs. PR: 6 hours of French, or equivalent. Mr. Stathers
107. Advanced Readings. I. 3 Hrs. Mr. Mitrani
108. Advanced Readings. II. 3 Hrs. Mr. Mitrani
109. Grammar and Pronunciation. I. 3 Hrs. For sophomores or juniors. PR: 12 hours of French, or equivalent. Staff
110. Advanced Conversation. II. 3 Hrs. For sophomores or juniors. PR: French 109 or equivalent. Staff
115. The Classical School. I. 3 Hrs. PR: 12 hours of French, or equivalent. Mr. Darby and Mr. Spiker
116. The Classical School After Moliere. II. 3 Hrs. PR: French 115. Mr. Darby and Mr. Spiker
217. Civilisation Francaise. I. 2 Hrs. PR: French 115 and 116. Mr. Spiker
221. The Romantic Movement. I. 3 Hrs. PR: French 115. Mr. Stathers
222. French Literature Since 1850. II. 3 Hrs. PR: French 221. Mr. Stathers
223. The Problem Play. I. 2 Hrs. PR: French 115 and 116 Mr. Darby
224. Historical Novel in the Nineteenth Century. II. 2 Hrs. PR: French 115. and 116. Mr. Darby
†226. Literary Criticism in the Nineteenth Century. II. 2 Hrs. PR: French 221 and 222. Mr. Spiker
†229. Literature of the Sixteenth Century. I. 2 Hrs. PR: French 115 and 116. Mr. Spiker
†230. The Sixteenth Century After 1550. II 2 Hrs. PR French 115 and 116. Mr. Spiker
231. Phonetics and Pronunciation. II. 2 Hrs. PR: 18 hours of French, or equivalent. Mr. Stathers
237. Moliere. II. 2 Hrs. PR: French 115 and 116. Mr. Spiker
†243. Etude du vocabulaire. I. 2 Hrs. PR. French 109 and 110. Mr. Stathers
†244. Explication de textes. II. 2 Hrs. PR: French 109 and 110. Mr. Stathers
†275. Theatre of Eighteenth Century. II. 2 Hrs. PR: French 115 and 116. Mr. Darby
†276. Voltaire. II. 2 Hrs. PR: French 115 and 116. Mr. Darby
†281. Topic in Romantic Period. I. 2 Hrs. PR: French 115 and 116. Mr. Stathers
†282. Topic in Contemporary Period. II. 2 Hrs. PR: French 115 and 116. Mr. Stathers

Graduate Division

391. Seminar. I. 2 to 5 Hrs. The origin of French comedy relative to native and foreign elements in its composition. Mr. Spiker
392. Seminar. II. 2 to 5 Hrs. The development of the theory of tragedy before the seventeenth century. Mr. Spiker
395. Seminar. I. 2 to 5 Hrs. Individual study of some subject chosen from the literature of the first half of the nineteenth century. Mr. Stathers
396. Seminar. II. 2 to 5 Hrs. A critical study of some phase of literature of the second half of the nineteenth century. Mr. Stathers

SPANISH

Lower Division

1. **Elementary Spanish.** I, II. 3 Hrs. Staff
2. **Intermediate Spanish.** I, II. 3 Hrs. Continuation of Spanish 1. Staff
5. **Contemporary Fiction.** I. 3 Hrs. Staff
6. **Contemporary Drama.** II. 3 Hrs. Staff

Upper Division

103. **Elementary Conversation.** I. 3 Hrs. PR: 6 hours of Spanish, or equivalent. Staff
104. **La Lengua Practica.** II. 3 Hrs. PR: 6 hours of Spanish, or equivalent. Staff
109. **Grammar and Conversation.** I. 3 Hrs. For sophomores or juniors. Mr. Ashburn
110. **Advanced Conversation.** II. 3 Hrs. PR: Spanish 109, or equivalent. Mr. Ashburn
†115 **Lyric Poetry.** I. 3 Hrs. PR: 12 hours of Spanish, or equivalent. Mr. Ashburn
†116. **Civilization and Culture.** II. 3 Hrs. PR: 12 hours of Spanish or equivalent. Mr. Ashburn
211. **Nineteenth Century Literature to 1870.** I. 3 Hrs. PR: 12 hours of Spanish, or equivalent. Mr. Ashburn
212. **Spanish Literature Since 1870.** II. 3 Hrs. PR: 12 hours of Spanish, or equivalent. Mr. Ashburn
217. **Spanish American Literature and Culture.** I. 3 Hrs. PR: 12 hours of Spanish, or equivalent. Mr. Mitrani
218. **Spanish American Literature and Culture.** II. 3 Hrs. Continuation of Course 217. PR: 12 hours of Spanish, or equivalent. Mr. Mitrani
221. **Literature of the Golden Age.** I. 3 Hrs. PR: 18 hours of Spanish, or equivalent. Mr. Mitrani
222. **The Golden Age after Lope de Vega.** II. 3 Hrs. PR: Spanish 221. Mr. Mitrani
223. **Estudios de Estilo.** I. 3 Hrs. PR: 18 hours of Spanish, or equivalent. Mr. Ashburn
224. **Explication de Textos.** II. 3 Hrs. PR: 18 hours of Spanish, or equivalent. Mr. Ashburn

Graduate Division

391. **Cervantes.** I. 3 Hrs. Mr. Singer
392. **Special Topics.** II. 1 to 3 Hrs. Themes in Spanish literature and culture. Mr. Singer
395. **Sixteenth Century Literature.** I. 3 Hrs. Mr. Ashburn
396. **Old Spanish.** II. 3 Hrs. Mr. Ashburn

ITALIAN

Lower Division

1. **Elementary Italian.** I. 3 Hrs. Staff
2. **Intermediate Italian.** II. 3 Hrs. Continuation of Italian 1. Staff
5. **Contemporary Readings.** I. 3 Hrs Staff
6. **Advanced Readings.** II. 3 Hrs. Staff

Upper Division

†109. **Composition and Conversation.** I. 3 Hrs. Mr. Darby
†110. **Advanced Conversation.** II. 3 Hrs. Mr. Darby

†Omitted, 1948-49.

†115. Italian Literature. I. 3 Hrs. General survey Mr. Darby
†116. Italian Literature. II. 3 Hrs. Continuation of course 115. Mr. Darby
†211. One Italian Author. I. 3 Hrs. PR: 12 hours of Italian, or equivalent. Mr. Darby
†212. Dante. II. 3 Hrs. PR: 12 hours of Italian, or equivalent. Mr. Darby

PORTUGUESE

Lower Division

†1. Elementary Portuguese. I. 3 Hrs. Staff
†2. Intermediate Portuguese. II. 3 Hrs. Continuation of Portuguese 1. Staff

RUSSIAN

Instructor KOBZAREFF

1. Elementary Russian. I. 3 Hrs.
2. Elementary Russian. II. 3 Hrs.
3. Intermediate Russian. I. 3 Hrs.
4. Intermediate Russian. II. 3. Hrs.

Social Work

Professor SUNLEY; Assistant Professors HOFFMAN and FULTON; Lecturers GERCHOW, HELMICK, JOHNSON, LAYMAN, THOMAS, and PICKETT

PURPOSE

The Department of Social Work provides a professional curriculum for the preparation of competent young men and women to meet the ever-increasing demand for personnel in both public and private social-work agencies. Social work deals with human relationships; its objective is that of helping persons to achieve more satisfying lives both as individuals and as members of social groups. Therefore it is the aim of this department, through carefully selected courses and faculty supervision of all field work, to aid students to acquire a broad theoretical and practical knowledge, including a historical perspective, of the different areas of social work.

GENERAL STATEMENT

The Department of Social Work is a member of the American Association of Schools of Social Work (the national accrediting body for professional schools of social work) and offers, on a graduate level, a one-year social work curriculum (30 semester hours of work) which leads to a professional Certificate of Social Work. In addition, the department makes available a pre-professional curriculum for juniors and seniors which leads to a B. S. degree with a major in social work. This undergraduate program is designed to prepare students for a few of the beginning positions in social work, but it is established primarily to provide excellent preparation for the graduate curriculum. Students who plan to make social work a life career, who want to be eligible for appointment to the higher positions, or who want to prepare in a specialized field must obtain at least a year of graduate work which leads to the professional Certificate of Social Work. All graduate work, including the field-work courses, may be used to fulfill the class-work and field-work requirements for membership in the American Association of Social Workers.

†Omitted, 1948-49.

Professional social-work education is on a graduate basis. In order to make possible the fullest development of graduate professional students during the first year of basic preparation, and in order to utilize selected field centers off the University campus, the department makes use of a block plan of field work. All graduate students begin their graduate work on the campus with a 9 weeks intensive period of class work. This is followed by a 16 weeks' period of field work on a block basis. After completion of the field work, for which the students obtain eight semester hours of graduate credit, they return to the campus for a second 9 weeks' period of intensive class work. All students while in field work are responsible for their living expenses and remain with the same agency for the entire 16 weeks' period unless, in exceptional instances and upon the basis for individual need, other plans seem to be more desirable.

Public social services in West Virginia were greatly expanded by the passage of the Federal Social Security Act of 1935 and by the West Virginia Public Welfare Law of 1936. In addition, the postwar period has created an unprecedented demand for new personnel. Case workers and child-welfare workers are needed for state public-welfare departments and private agencies, medical and psychiatric social workers for hospitals and clinics, social-group workers for settlements and community centers, community-organization workers for councils of social agencies and community chests, and administrators for all areas of social work. In other words, there are opportunities today for placement, advancement, and promotion for well-prepared personnel in both the private and public fields of social work.

ADMISSION REQUIREMENTS

Upper Division

Students who have completed 58 semester hours of work or more in an accredited educational institution may be admitted, upon the basis of a written application, to the department of social work for the pre-professional curriculum. Application should be made at least three weeks before the beginning of the semester for which registration is desired. Application forms may be obtained from the head of the department.

Each applicant is evaluated on the basis of his scholarship, personality, health, and other characteristics. In addition, the applicant must be willing to provide references, to arrange for a personal interview, if necessary, and to furnish written materials which may be requested.

Graduate Division

Applicants holding Bachelor's degrees from West Virginia University or from other institutions within the State approved by the State Board of Education and authorized to confer such degrees, or from institutions outside the State standardized by membership in one of the associations of colleges and secondary schools, will be considered for admission as graduate students in the department of social work. Candidates should apply to the head of the department and should present to the Registrar an official transcript of the credits upon which their Bachelor's degrees are based. Applications which have been approved and recommended by the head of the department are submitted to the Graduate Council for final approval.

Application should be made in person or by a letter at least three weeks before the date when a graduate student plans to enter the department. Application forms may be obtained from the head of the department.

Students who have taken the recommended pre-professional curriculum at West Virginia University will have fulfilled the undergraduate social-science requirements. Students who have not had this curriculum should have an undergraduate background of at least 24 semester hours in the social sciences, including preferably at least 12 semester hours in one of the following fields: economics, political science, psychology, sociology, or selected courses in history.

Students who have not fulfilled the undergraduate social-science requirements may be admitted to the department of social work on condition that they complete such requirements before they become eligible for a professional Certificate of Social Work. The head of the department determines the courses needed to meet undergraduate deficiences.

All students who are applying for admission to the graduate professional curriculum are evaluated on the basis of personal characteristics, scholarship, health, interest in social work, etc. Personal interviews, when convenient, are requested, and all students are asked to submit references.

SPECIAL REQUIREMENTS FOR THE CERTIFICATE OF SOCIAL WORK

The professional Certificate of Social Work is awarded to those who meet the following requirements:

1. A minimum (including field work) of 30 semester hours of graduate social-work credit.
2. A minimum of two semesters of supervised field work in selected social agencies (450 clock hours).
3. A grade of C or better in all graduate work.

FIELD WORK

Field work is a basic requirement for the professional certificate, and it is provided in a case-work agency selected by the department. Students give full time, with office hours and vacation periods correlated to those of the agency staff, for a period of 16 weeks for 8 hours of credit. The experience is designed to provide an opportunity for the student to try out his own ability, to apply his knowledge, and to develop and test his skills through practice.

Supervision is provided by supervisors assigned by the selected agencies or by faculty members who supervise a unit of students. Monthly reports on student's progress, in addition to material gained through individual and group conferences, provide a continuing relationship between the department faculty the field work supervisors, and the students.

LOANS AND SCHOLARSHIPS

Numerous loan funds and scholarships are available to properly qualified graduate social-work students. For details see Part II, pages 72 to 77.

COURSES OF INSTRUCTION

Upper Division[1]

220. **The Field of Social Work.** I. 3 Hrs. Introduction to various fields of social work and discussion of the history, scope, organization, problems and methods of each. Mr. Fulton or Mr. Sunley

212. **Field-work Observation.** II. 2 Hrs. Observation of public-welfare administration and casework practice in selected social agencies. Field visits to public-welfare departments, private casework agencies, Federal Social Security Board offices, United States Employment Service offices, health agencies, etc., to observe their structure, scope, and function and to obtain limited participation in each program. PR: Social Work 251. Mr. Fulton or Miss Hoffman

230. **The History of Social Work.** II. 2 Hrs. The European and American social-welfare developments; designed to give the students an understanding of present-day practices and trends of social work. Mr. Sunley

260. **Problems of Child Welfare.** I. 3 Hrs. Methods, administrative problems, and standards relating to children in foster homes, children born out of wedlock, child-labor problems, children in institutions, child-welfare services, maternal and child-health services, and child adoption problems. Miss Hoffman or Mr. Sunley

251. **Introduction to Social Work.** I. 3 Hrs. Relationships of various professional workers to the problems of understanding and treating human behavior. Miss Hoffman

274. **Housing.** I. 3 Hrs. Urban and rural housing problems. Special attention to the historical material and current problems such as Federal and State legislation, community planning, new types of houses, tenant selection, methods of finance, legal difficulties, management, etc. Mr. Saposnekow

285. **Aspects of Public Social Services.** II. 2 Hrs. A discussion of the mentally ill, mental defectives, the physically handicapped, the sick, and delinquents including historical material, current programs of care and the structure, scope, and function of administrative authorities responsible for these groups of disadvantaged persons. Mr. Sunley

Graduate Division

301. **Casework.** I. 3 Hrs. Principles and methods of casework as illustrated by study and discussion of selected cases. Mr. Fulton

302. **Casework.** II. 3 Hrs. Continuation of Social Work 301 with special emphasis on casework in child welfare. PR: Social Work 301. Miss Hoffman

304. **Group Work and Community Relationships.** I. 3 Hrs. Theory and methods in group-work practice, program content and skills of group work, and supervisory administrative processes. Also study of communities, social problems and resources, nature of social work, organization of a community, and relationship to case work and group work. Mr. Fulton

311. **Field Work.** I. 4 Hrs. Field work is given in a casework agency selected by the department. Supervision is under faculty members and agency student supervisors. Students spend an 8-week period in the agency on a full-time basis carrying responsibility for a limited case load. Prerequisites or corequisites: 301 and 371. Mr. Fulton and Miss Hoffman

312. **Field Work.** II. 4 Hrs. Continuation of Social Work 311. In the second 8-week period students carry a larger case load and are assigned cases presenting more complicated problems of family relationships and individual adjustments in rural and urban settings. Prerequisites or corequisites: Social work 301, 302, and 311. Mr. Fulton and Miss Hoffman

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[1]The pre-professional curriculum also includes Agri. 271, Agricultural Problems and Organizations in West Virginia, II, 2 Hrs.; Home Ec. 160, Problems of Home Management and Family Living, II, 3 Hrs.; and Econ. 105, Public Welfare Accounting, I, 3 Hrs.

315. **Principles of Psychiatry for Social Work.** II. 2 Hrs. Normal growth of an individual from the uterine period through infancy, childhood, adolescence, adulthood, and old age, Emphasis on the ways in which personality development is constantly influenced by physical, emotional, psychological, and social factors and on the mechanisms individuals utilize to achieve balance and maturity. Mr. Knapp and Miss Hoffman

320. **Psychiatric Problems of Casework.** II. 2 Hrs. Concepts implied in our understanding of human growth and personality development. PR: Psychology 1 and Social Work 301. Miss Hoffman

344. **Domestic Relations and Allied Problems.** I. 2 Hrs. Selected legal problems such as divorce, non-support, desertion, parent-child relationships, guardianship and custody, adoption, illegitimacy, wage assignments, garnishments, and legal counsel for needy cases.
Mr. Colson and Mr. Sunley

351. **Social Statistics.** I. 2 Hrs. Application of statistical methods to social problems and interpretation of statistics concerning dependency, mental illness, mental defectiveness, illiteracy, housing, unemployment, etc.
Mr. Sunley

360. **The Public-welfare Services.** I. 3 Hrs. Discussion of scope of public welfare, rise of public responsibility, and evolution and analysis of current public-welfare programs. Mr. Sunley

361. **Social-welfare Administration.** II. 3 Hrs. Administrative principles and processes involved in the organization and operation of social agencies. Special attention is given to budgets; control of expenditures; job analyses; definition of operations; assignment of duties; development of lines of responsibility; coordination of services; staff supervision; relationship of executive to board, staff, and community; use of consultants; intake problems; staff development; office management; use of committees; public relations; and research. Mr. Sunley

364. **Research Methods.** II. 2 Hrs. Discussion of purposes; accepted methods of research including use of documentary sources, case studies. statistical analyses, and social surveys; techniques and tools of research such as sampling, interviewing, schedules, questionnaires, and outlines; editing, coding, and classification; and procedures such as choice of subject, delimiting the field, preparation and use of a bibliography, collection of data, analysis and interpretation of data, and presentation of the results of research. Mr. Sunley

371. **Medical Information.** I. 3 Hrs. Orientation in the problems of health and disease, supplemented by discussions of the case-work implications of medical problems.
Medical School Staff, Lecturers, Miss Hoffman and Mr. Fulton

380. **Social Insurance.** II. 3 Hrs. History, principles, method, and problems of workmen's compensation, old-age insurance, unemployment insurance, and health insurance in the United States and European countries. Special attention to problems of coverage, contributions, benefits, methods of financing, administrative difficulties, relationship to public-assistance programs, and recent legislation. Mr. Sunley

Sociology

Professor HARRIS, Associate Professor SAPOSNEKOW, Instructor KERR

Some of the professions or activities for which the work of an undergraduate sociology major furnishes basic preparation are social-science teaching in high schools and junior colleges, community recreation leadership, Red Cross activities, and Boy and Girl Scout leadership. College training in sociology also prepares adult men and women to aid in the organizing and carrying on of nonprofessional activities of a social-welfare nature. These nonprofessional community-welfare activities are steadily increasing in importance in our American communities.

COURSES SUGGESTED FOR SOCIOLOGY MAJORS

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	Political Sci. 5	3	Political Sci. 6	3
Biology	4	Botany or zoology	4	French or German	3	French or German	3
French or German	3	French or German	3	Economics 1	3	Economics 2	3
Humanities 1	4	Humanities 2	4	Psychology 1	3	Philosophy 4	3
Mil. sci.	1	Mil. sci.	1	Sociology 1	3	Mil. sci. or	2
Physical educ.	1	Physical educ.	1	Mil. sci. or	2	Physical educ.	1
				Physical educ.	1	Sociology 3	3
	14 to 16		14 to 16		16 to 17		16 to 17

COURSES OF INSTRUCTION

Lower Division

*1. **Introduction to Sociology.** I, II. 3 Hrs. Analysis of the social forces is followed by a description of social institutions and social processes. Staff

3. **Rural Sociology.** II. 3 Hrs. Distinctive characteristics and problems of rural society. Special attention to West Virginia. Mr. Harris

Upper Division

102. **Principles of Sociology.** I, II. 3 Hrs. Analysis of the social forces, social heritage, the more important social processes, of collective behavior, social control, and social change. For upper-division students. Staff

105. **Urban Sociology.** II. 3 Hrs. Rise and growth of urbanism. Problems of population, health, housing and sanitation, education and recreation, poverty, and crime in the city. Mr. Saposnekow

144. **Culture and Personality.** II. 3 Hrs. An analysis of significant interrelations of persons and social groups. Mr. Kerr

210. **Marriage and the Family.** I. 3 Hrs. The modern family in its sociological, economic and legal aspects; courtship, parent-child interaction; problems of divorce and of birth control. Mr. Harris

231. **Race Relations Problems.** I. 3 Hrs. Problems of race relationships, with special reference to present-day aspects of the American Negro problem. Mr. Harris

232. **American Minority Peoples.** I. 3 Hrs. After a brief historical survey of immigration, the economic, industrial, political, and social phases of the problems are discussed. Mr. Saposnekow

233. **Problems of Crime and Delinquency.** I. 3 Hrs. Readings, research projects, and inspection trips. Mr. Saposnekow

234. **Social Pathology.** II. 3 Hrs. Readings, research projects, and inspection trips. Mr. Saposnekow

240. **Social Control.** I. 3 Hrs. The why and how of social-control processes. Mr. Harris

241. **Community Organization.** II. 3 Hrs. Practical and theoretical aspects of community and group organization, with special reference to community resources. Mr. Harris

243. **Introduction to Anthropology.** I. 3 Hrs. A descriptive survey with emphasis on social anthropology. Mr. Saposnekow

246. **History of Social Thought.** II. 3 Hrs. Development of sociological theory since Comte and Spencer. Mr. Saposnekow

251. **Contemporary Social Problems.** I or II. 3 Hrs. Analytical study of selected social problems which involve economic and political as well as social factors. Mr. Harris

*Sociology 1 or 102 is prerequisite to all other sociology courses.

257. **Technology and Society.** I. 3 Hrs. Sociological problems created by the modern machine and by its application to the processes of production and distribution of economic goods. Mr. Harris

Graduate Division

391. **Seminar in Current Sociological Literature.** I or II. 2 to 4 Hrs. Enrollment by consultation with instructor. Mr. Saposnekow
392. **Seminar in Social Institutions.** I, II. 2 to 3 Hrs. Mr. Saposnekow
395. **Research and Thesis.** I. 2 to 3 Hrs. Mr. Harris
396. **Research and Thesis.** II. 2 to 3 Hrs. Mr. Harris

Speech

Professor HENNING; Associate Professor FEAR; Assistant Professor BOYD; Instructors HALLER, LAMBERT, PRENDEVILLE, ROBIE, SHEPPARD, and WARFIELD

The curriculum of the Department of Speech is so organized that a student may receive comprehensive training in the cultural and practical aspects of any one or more of six fields of speech: (1) interpretation; (2) public speaking; (3) radio; (4) speech correction; (5) teaching; and (6) theatre. In all courses of training in speech skills, professional standards of achievement are emphasized.

FORENSIC ACTIVITIES. Intramural and intercollegiate forensics, including debate, oratory, and extemporaneous speaking, receive due attention. Speech tournaments, trips, and tours as well as campus contests are included in the program. Participation in these activities may lead to membership in Delta Sigma Rho, honorary forensic fraternity.

THEATRICAL PERFORMANCES. The University Players, in conjunction with the classes in dramatics, present a regular program of plays which affords ample opportunity for student participation. In addition, other public and semi-public performances are scheduled to provide practical experience for less advanced students. Membership in Alpha Psi Omega may be earned by superior work in connection with various productions.

RADIO PROGRAMS. The University Radio Theatre produces a half-hour show, broadcast each week over Station WAJR. All regularly enrolled students in the University are eligible to audition for any of the programs or plays.

OFF-CAMPUS SPEECH SERVICES. The Department of Speech sponsors and furnishes student programs in the form of short plays, speeches, interpretative readings, and debates for off-campus performance before women's and civic clubs, community organizations, and church groups throughout the state.

MAJORS. The minimum number of hours in Speech courses for a major is 30, and for a minor is 15. For those selecting speech as a second teaching field the following requirements, totalling 24 hours, are to be met and should be scheduled on the basis of the program outlined below for speech majors who plan to teach:

COURSE	*NAME*	*HOURS*
3.	Voice and Diction	3
11.	Public Speaking	3
121.	Argumentation and Debate	3
162.	Play Directing	3
250.	Speech Correction	3
270.	The Psychology of Speech	3
	Electives	6
	Total	24

DISTRIBUTION OF COURSES

For all speech majors, as well as for those who choose speech as a second teaching field, the course in the freshman and sophomore years should be distributed as follows:

Freshman year:	first semester: Speech 3.
	second semester: Speech 6, 29.
Sophomore year:	first semester: Speech 11, 50.
	second semester: Speech 51, 120.

In addition to the above, speech majors who plan to teach speech and those who have chosen speech as a second teaching field should select courses in their junior and senior year as follows:

Junior year:	first semester: Speech 161,* 162.
	second semester: Speech 160,* 121.
Senior year:	first semester: Speech 221,* 250.
	second semester: Speech 270.

Speech students who are interested in professional training will choose major and minor fields of concentration within the Speech Department. Departmental standards require the satisfactory mastery of a minimum of 12 hours of upper-division courses in the major speech field and 6 hours of upper-division courses in the minor speech field. The minor field should be chosen only after consultation with the head of the department. The student will also select a regular minor in another department to meet degree requirements.

PLATFORM TEST. During the first semester of the junior year each speech major shall demonstrate his speech proficiency in a 15-minute platform test at a time and place designated by the head of the department. Passage of this test shall be prerequisite to continued registration as a speech major. Two tests shall be the maximum allowed any student. A student may petition to have any public platform appearance in which he may have occasion to appear judged as his platform test. Satisfactory passage will fulfill this requirement.

COURSES OF INSTRUCTION

Lower Division

3. **Voice and Diction.** I, II. 3 Hrs. Drills for developing proper breath support and for producing a strong, flexible, resonant voice. Coordination of mind and voice. Phonetics. Voices recorded and analyzed, with corrective exercises prescribed. Open to all students. Mrs. Fear and Miss Sheppard

6. **Acting.** I, II. 3 Hrs. Drills for developing muscular control; for overcoming inhibitions; for rendering the body expressive of thought and emotion. Coordination of mind and body. Open to all students. Mr. Boyd

11. **Public Speaking.** I, II. 3 Hrs. Study and application of the principles of practical public speaking. Training in the composition and effective delivery of speeches for the purpose of developing skill in thinking and speaking before an audience. PR: English 1 and 2. Staff

13. **Public Speaking.** I, II. 2 Hrs. For Engineering students only. Staff

29. **Oral Interpretation.** I, II. 3 Hrs. Development of mental and emotional responsiveness to the printed page. Study of recordings of well-known speakers and readers. Practice in reading all types of literature. Open to all students. Mrs. Fear and Miss Sheppard

*Advised, but not required, courses.

50, 51. **Theatrical Methods and Practices.** I, II. 3 Hrs. each semester. A lecture-laboratory symposium basic to all upper-division theatre courses. Covers the basic techniques and terminologies of acting, scene construction, lighting, properties and costuming, directing, and theatre history. Participation in the actual production of the University Theatre and Children's Theatre plays gives each student practical experience in producing the play. Required of all theatre majors and minors. Prerequisite to all upper-division theatre courses.
Mr. Boyd, Mr. Prendeville, Mr. Warfield

98, 99. **Verse Choir.** I, II. 1 Hr. Practice in oral interpretation of literature in group speaking. Miss Sheppard

Upper Division

INTERPRETATION

100, 101, 102, 103. **Advanced Verse Choir.** I, II. 1 Hr. Training in choric speech for public performance. PR: Speech 98 or 99 or consent of instructor. Miss Sheppard

104. **Advanced Oral Interpretation.** I. 3 Hrs. PR: Speech 29. Mrs. Fear

113. **Advanced Voice and Diction.** II. 2 Hrs. PR: Speech 3 or equivalent. Mrs. Fear

200. **The Art of Story-Telling.** II. 3 Hrs. Principles involved in effective presentation of stories, with practical experience in the classroom and before audiences. Stories of all types for adults and children studied. Offered 1947-48 and alternate years. Mrs. Fear

201. **Oral Interpretation of Poetry.** I. 2 Hrs. Alternates with Speech 202. PR: Speech 104. Offered in 1947-48. Mrs. Fear

202. **Oral Interpretation of Dramatic Literature.** I. 2 Hrs. Alternates with Speech 201. PR: Speech 104. Not offered in 1947-48. Mrs. Fear

203. **Professional Reading.** II. 2 Hrs. For advanced majors only. PR: Speech 104. Mrs. Fear

Voice and Diction Clinic. I, II. Students in speech courses needing special attention to problems of breathing, voice production, and diction will be given special remedial work in the clinic.

PUBLIC SPEAKING

120. **Group Discussion.** I, II. 3 Hrs. Theory and practice of the various forms of group discussion. Principles, methods, and types of group discussions; application to contemporary problems. PR: Speech 11.
Mr. Henning

121. **Argumentation and Debate.** I, II. 3 Hrs. Principles of argument, evidence, and reasoning; application to debating. Mr. Robie

220. **Speech Composition.** II. 3 Hrs. Materials of speech, organization, and style; application to delivery. PR: Speech 11. Mr. Henning

221. **Persuasion.** I. 3 Hrs. Study of and practice in the welding of an audience, securing and holding attention, use of suggestion, influencing belief, psychology of motivation, and dramatization of ideas. PR: Speech 121 or equivalent. Mr. Henning

222. **Forms of Public Address.** II. 3 Hrs. Composition and delivery of the oration, the political speech, the speech of introduction, the dedicatory address, and the eulogistic speech. PR: Speech 221. Mr. Henning

223. **Advanced Argumentation and Debate.** I, II. 3 Hrs. Designed primarily for Varsity debaters and Law students. PR: Speech 121. Mr. Robie

239. **Seminar: Problems in Public Speaking.** I, II. 3 Hrs. Mr. Henning

RADIO

140. **Introduction to Radio.** I. 3 Hrs. Microphone technique, operational procedures, broadcasting systems, critical analysis of programs and radio audiences, and FM broadcasting. Mr. Warfield

141. **Radio Announcing.** II. 2 Hrs. Microphone techniques, analysis of audience situations, reading commercials, conducting interviews, announcing news, sports, and special events. PR: Speech 3. Mr. Warfield

142. **Radio Acting.** I, II. 3 Hrs. A beginning course; characterization and interpretation of radio dramas. PR: Speech 140 or consent of instructor. Mr. Warfield

240. **Writing for Radio.** I. 3 Hrs. Practice in mechanics of radio writing, including format, pagination, and typing. Feature and variety programs, unit and serial dramas, and the dramatic narrative are covered. Sources of material, plot, creation of characters, and good dialogue. Mr. Warfield

241. **Advanced Radio Acting.** II. 3 Hrs. PR: Speech 142. Mr. Warfield

242. **Radio Production.** I, II. 3 Hrs. Training in planning and producing the radio show. Participation in University radio programs. PR: Speech 141 and 142 or equivalent. Mr. Warfield

243. **Introduction to Television.** I. 2 Hrs. Mr. Warfield

(See Department of Physics, College of Engineering, and School of Journalism for additional radio courses. Credit for these courses can be counted toward a radio major in speech.)

SPEECH CORRECTION

150. **Phonetics.** I. 3 Hrs. Sounds of the English language. Adaptation to interpretation, drama, radio, and speech correction. Mrs. Fear

250. **Speech Correction.** I. 3 Hrs. Defective speech, its causes, methods of diagnosis, therapeutic procedures, and prophylaxis. Mr. Henning

251. **Speech Anatomy.** I. 3 Hrs. Anatomical and physiological study of the speech mechanism. Detailed study of the structures and their functions of the thorax, larynx, pharynx, oral and nasal cavities, and face. Primarily for pre-medical students and students of speech pathology. Mr. Henning

252. **Speech Pathology.** II. 3 Hrs. Theories and therapies of severe speech disorders. PR: Speech 251. Mr. Henning

Speech Clinic. I, II. Students in speech courses found to possess speech defects will be required to attend the clinic for diagnosis and treatment. Insofar as time will permit, the services of the clinic will be made available to any student of the University as well as to the general public.

THEATRE

160. **Theatrical Make-up.** I, II. 1 Hr. Mr. Boyd

161. **Stage Craft.** I. 3 Hrs. Problems of plays from the standpoint of the technician. Study of scenery design and construction, lighting, properties, and costumes through lectures, demonstrations, and laboratory. PR: Speech 50 and 51. Mr. Prendeville

162. **Play Directing.** I. 3 Hr. PR: Speech 50 and 51. Mr. Boyd

163. **Play Production.** II. 3 Hrs. PR: Speech 161. Mr. Prendeville

164. **Theatre Workshop.** I, II. 1 to 3 Hrs. For the production of University plays and the informal stimulation of interest in creative arts. Open to all students. Mr. Prendeville

260. **Advanced Acting.** II. 3 Hrs. PR: Speech 6. Mr. Boyd

261. **Studies in Theatrical Dialects.** II. 2 Hrs. Mr. Boyd

262. **Playwriting.** I. 3 Hrs. PR: Speech 50 and 51 and consent of instructor. Mr. Prendeville

263. **Scene Design.** I, II. 3 Hrs. Lecture and laboratory course in theories of scene design for the stage, including practical participation in planning scenery for University productions. Open to juniors and seniors. PR: Speech 50, 51, and 161.

268. **Seminar: Problems in Acting and Directing.** I, II. 3 Hrs. Mr. Boyd

269. **Seminar: Problems in Play Production.** I, II. 3 Hrs. Mr. Prendeville

RELATED COURSES

170, 171, 172. **Extra-curricular Speech Activities.** I, II. 1 to 3 Hrs. The head of the department may grant credit for any extra-curricular speech activity which is assigned and directed by a member of the speech staff. Staff

270. **The Psychology of Speech.** II. 3 Hrs. Psychological principles involved in the speech situation. Analysis of the roles of emotion, habit, learning, judgment, rating, and imagery in speech. PR: 6 hours of psychology and 18 hours of speech. Mr. Henning

275. **Speech Problems of Children.** Summer Sessions only. 3 Hrs. Normal development of speech habits in children. Diagnostic and remedial procedures for the speech defective are studied. Consideration to relationships between speech and allied activities such as reading, spelling, and disciplinary problems. Mr. Henning

301. **Research Problems and Methods.** I, II. 3 Hrs. PR: Graduate standing Mr. Henning

370. **Research.** I, II. 1 to 3 Hrs. For graduate students preparing a thesis or dissertation. Mr. Henning and Staff

375. **Independent Study.** I, II. 1 to 3 Hrs. Open to graduate students with consent of the department of major interest. Individual programs of study. Mr. Henning

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The College of Education

FUNCTIONS

Through its undergraduate courses, its seminar, its laboratory schools, and its encouragement and direction of education investigation and research, the College of Education aims to contribute to the educational efficiency of West Virginia by inculcating a liberal and more scientific conception of the functions of the public schools of the state and by providing the professional training of secondary-school teachers, principals, and supervisors, elementary-school principals and supervisors, city-school administrators, county superintendents, college teachers, educational counselors, and educational research specialists.

ORGANIZATION

The College of Education comprises the College with its resident courses of instruction and its facilities for research; the University Rural High School with its opportunities for observation, student teaching, directed supervision, and experimentation; and the Laboratory Elementary School with its opportunities for graduate study of the progress of pupils.

The Standing Committees

SCHOLARSHIP: MESSRS. WHEAT and COOK and MISS POLLOCK
LIBRARY: MESSRS. BALDWIN, FEDERER, and WHEAT

Pre-Education Adviser

The degree of Bachelor of Science in Education requires four years of college work, the first two years of which are done in the College of Arts and Sciences under the supervision of Prof. Elizabeth M. Stalnaker, pre-Education adviser. The student registers in the College of Education for the last two years.

Transfer Students

Applicants from junior colleges, normal schools, teachers colleges, colleges, other universities, or other colleges within this University will, upon receipt of official transcript, be admitted to this College with equal standing, provided the transcript shows graduation from a standard high school and the completion of 58 semester hours of approved freshman and sophomore work with an average of at least 1 honor point per credit hour on all work presented. Students from other colleges who contemplate transferring to this College should so order their courses of study as to meet junior standing and should be fulfilling the curricular requirements for the certification of teachers as stated in the latest revision of the Bulletin, **Requirements Applicable to Degrees and to Teacher Certification.**

ADMISSION

The requirements for admission to the College of Education are (1) graduation from any approved curriculum in a first-class high school and (2) 58 semester hours of approved college work with an average of at least one honor point per credit hour on all work presented.

Upper-division Advisers

Each junior and senior in the College of Education will be assigned an adviser who is a member of the College staff.

REQUIREMENTS FOR GRADUATION

To be eligible for recommendation for the degree of Bachelor of Science in Education, a candidate must:

1. Comply with the general regulations, as announced in the General information section (Part II) of this Catalogue, concerning entrance, advanced standing, classification, examination, marks, honor points, etc.

2. Satisfy the General Requirements for certification, listed in the above Bulletin, **Requirements Applicable to Degrees and to Teacher Certification.**

3. Complete the required 20 semester hours of approved courses in Education, listed in the above Bulletin.

4. Select and pursue two teaching fields.[8]

5. Adhere to the patterns, listed in the above Bulletin, in completing the prescribed number of hours in each teaching field.

6. Present 128 semester hours of approved college credit, with a general average of 1 honor point per credit hour and with an average of 1 honor point per credit hour in each teaching field and in Education. (Only credit earned in West Virginia University will be used in computing honor points for graduation). At least 100 of the 128 hours must be in academic subjects. Two hours of school health or hygiene may be included in the 100 hours. The candidate must have been enrolled in the College of Education for at least 26 credit hours.

7. Be at least 18 years of age, of good moral character, interested in educational work, and mentally, physically, and otherwise qualified to perform the duties of a teacher.

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[8]During the emergency, because of a shortage of teachers, candidates for the B.S. in Education degree will be permitted, but not encouraged, to graduate with only a first teaching field.

Fulfillment of the requirements for graduation from the College of Education qualifies a candidate to apply for recommendation for a West Virginia first-class secondary-school teaching certificate. For instruction on applying for a state certificate, see the above Bulletin.

THE COURSES OF INSTRUCTION

Courses in Education are open only to students of junior, senior, and graduate standing. The following courses are required of high-school teachers for recommendation for a first-class certificate: Junior year, Ed. 106, 109, and 2-4 hours of approved electives; Senior year, Ed. 120, 150-170, 214, 224 and enough additional hours chosen from the following approved electives to meet the minimum requirement of 20 hours in Education: Ed. 101, 112, 136, 197, 203, 221, 222, 231, 233, 252, 281, 282, 284, 285, 291, 150-170 in a second teaching field, 224B (3 hrs.) in a second teaching field, and Psych. 1 (2 hrs.).

Instructors

Professors ALLEN, BALDWIN, HUDELSON, NOER, PARSONS, POLLOCK, STEMPLE, and WHEAT; Professor Emeritus L. B. HILL; Associate Professors COOK and C. W. HILL; Assistant Professors BROWN and COLEBANK; Instructors BOGGESS, BROCHICK, BROWN, BUTLER, COPLIN, EICHER, FEDERER, FIZER, GATES, JAMISON, MEYER, RAPKING, ROLLER, SMITH, WILT, and WOOFTER; Instructor Emeritus SOUPART; Teachers BALIKER, BRENNAN, CARRICO, DORSEY, PROUDFOOT, SEMON, SHAHAN, SMREK, WASMUTH and WATSON.

NOTE: For the kinds of graduate certificates for which the following courses are required or approved see page 188, and for the undergraduate certificate see the Bulletin, **Requirements Applicable to Degrees and to Teacher Certification.**

Undergraduate Division

101. Introduction to Vocational Teaching. II. 2 Hrs. A survey of the field of vocational education with particular emphasis on orientation as the foundation for occupational preparation. Mr. Allen

106. Introductory Educational Psychology. I, II. 3 Hrs. Should be taken in junior year. Mr. Baldwin, Mr. Cook, Miss Pollock, and Mr. Wheat

109. Secondary Education. I, II. 2 Hrs. Introduction to secondary-school teachers' problems of organization and administration not including instructional matters. Staff

115. Student Teaching in Elementary-school Music. I, II. 2 Hrs. Observation and practice of teaching music to pupils in grades one to six in the University Laboratory Elementary School. Open to seniors in the School of Music who have completed 27 hours in Music and 7 semester hours in Education with an honor-point average in each and a general honor point average of 1.0. Opportunity for observation and practice is limited to one class period (one-half hour) each day each semester for 4 students. Attendance is required on alternate days, when instruction in Music is given, in each of the two classrooms of the Laboratory Elementary School. Miss Wasmuth, Mr. Brown

116. Psychology of the Elementary-school subjects. I. 2 Hrs. Mr. Wheat

117. Materials and Methods of the Elementary School. 2 Hrs. Mr. Wheat

120. **Principles of Teaching in Secondary Schools.** I, II. 2 Hrs. Open only to those who qualify for the student teaching block. Mr. Cook

130. **Materials and Methods in Elementary-school Music.** I, II. 1 Hr. (To be carried simultaneously with Education 115). Miss Wasmuth, Mr. Brown

135. **The Elementary-school Curriculum.** 2 Hrs. Mr. Wheat

136. **High-school Program of Studies.** I, II. 2 Hrs. Principles governing the selecting of subjects and subject matter for secondary schools with special emphasis on possibilities within given subjects. PR: Ed. 109. Mr. Stemple

150-170. **Materials and Methods of High-school Teaching.** I, II. 2 Hrs. Special methods in the various secondary-school teaching fields. For West Virginia certification these courses are an integral part of Ed. 224. May also be chosen as a two-hour elective by students who are registered for student teaching in other fields.

The various sections of this course, with their instructors, follow:

150. **Biology.** I, II. 2 Hrs. Mr. Rapking

151. **Science.**[1] 2 Hrs. Mr. Allen

152. **Physical Education.** I, II. 2 Hrs. Mr. Eicher, Mr. Fizer and Miss Meyer

155. **Library Science.** I, II. 2 Hrs. Miss Hancock

160. **Agriculture.** I, II. 3 Hrs. Mr. Hill or Mr. Parsons

161. **English.** I, II. 2 Hrs. Miss Brochick, Miss Jamison, Miss Smrek, and Miss Woofter

163. **Home Economics.** I, II. 2 Hrs. Miss Boggess

164. **Industrial Arts.** I, II. 2 Hrs. Mr. Brennan

165. **Mathematics.** I, II. 2 Hrs. Miss Wilt

166. **Physical Science.** I, II. 2 Hrs. Mr. Federer

167. **Social Science.** I, II. 2 Hrs. Miss Coplin and Miss Gates

168. **Art.** I, II. 2 Hrs. Mrs. Roller

169. **Music.** I, II. 2 Hrs. Mr. Brown and Miss Wasmuth

170. **Commerce.** I, II. 2 Hrs. Miss Smith

197. **Survey of Vocational Education.** I. 2 Hrs. The relationship to each other and to the public-school program of vocational agricultural, vocational home economics, trade and industrial education, commercial education, distributive education, rehabilitation, emergency defense training. Mr. Allen

203. **Organization and Administration of Adult Education.** II. 2 Hrs. Mr. Allen

212. **Techniques of Education Evaluation.** 2 Hrs. Methods of comparing educational products and facilities and making estimates essential in school planning and guidance.

214. **Advanced Educational Psychology.** I, II. 2 Hrs. PR: Ed. 106. Not open to juniors. Should be taken parallel or following Ed. 224. Open for graduate credit only to those with 6 semester hours of prerequisite work in psychology and/or educational psychology. Mr. Baldwin and Mr. Wheat

[1] A special section available as an elective for those selecting some science as a second or third teaching field. All branches of science are considered. Registration not necessarily concurrent with Ed. 120 and 224.

221. **Audio-visual Resources for Instruction.** I, II. 2 Hrs. Uses of sensory techniques in teaching. Restricted to seniors and graduates. Mr. Allen

222. **Current Practices in Secondary Education.** I, II. 2 Hrs. Especial emphasis is placed on the Eight-year Experiment in the thirty schools. Miss Pollock

224, 224B. **Student Teaching.** I, II. 3 Hrs. each. PR: Evidence of teaching traits as shown by personal attitudes, industry, character, general intelligence, good speech habits, physical and mental fitness; completion of approximately 75% of the hours required in each of two teaching fields and at least 7 semester hours in Education, with a general honor-point average of 1.0 and an average of 1.0 in each teaching field and in Education. This course is to be taken simultaneously with Ed. 120, Principles of Teaching in Secondary Schools, and Ed. 150-170. Ed. 224 will be offered in the University Rural High School or in other student teaching centers. One half of the students should reserve a full half day each morning and the other half should reserve the entire afternoon for this work. All students must reserve Monday, 7 to 9 p.m., bi-weekly, for teachers' meetings. Application for registration should be made to Mr. Cook early in the preceding semester. Student teaching will be given in the following subject-matter fields: agriculture, art, biology, commerce, English, home economics, industrial arts, library science, mathematics, music, physical education, physical science, and social studies. Mr. Butler, Mr. Colebank, Mr. Hill or Mr. Parsons, and U. R. H. S. Faculty

231. **Philosophy of Education.** I. 2 Hrs. Mr. Baldwin

233. **Educational Sociology.** II. 2 Hrs. Mr. Baldwin

251. **Cinematography.** 2 Hrs. Practical participation in planning and producing motion pictures for use in teaching, for supporting the school's public relations program, and in educational research. Mr. Allen

258. **Education for Special Groups.** II. 2 Hrs. A study of the techniques and organization of instruction of adults and teen-age youth not in attendance at ordinary day-school classes. Part-time, evening, and dull-season classes are among the educational projects considered. Mr. Allen

262. **Vocational Home Economics in Secondary Schools.** I, II. 2 Hrs. PR or parallel: Ed. 120, 163, and 224; home economics, 25 hours. Primarily for seniors and teachers of home economics. Miss Noer

266. **Adult Education in Homemaking.** I, II. 2 Hrs. Current trends and present activities in the field of adult education. Organization of adult classes, development of unit outlines; consideration of teaching methods; illustrative material and bibliography for use in adult classes. Staff

277. **Organizing and Directing Supervised Practice Programs in Vocational Agriculture.** II. 2 Hrs. Planning programs of supervised practice, supervising, and evaluating such programs for all-day, part-time, and evening-school students. Mr. Parsons or Mr. Hill

278. **Planning the Programs and Organizing the Courses for Departments of Vocational Agriculture.** I. 2 Hrs. Involves gathering data and studying the farming problems and practices; for all-day, part-time, and evening-school students. Mr. Parsons or Mr. Hill

281. **History of Elementary and Secondary Education in the United States.** II. 2 Hrs.

282. **Development of Modern Education.** I. 2 Hrs. Comparative study of schools in the leading nations of Europe since 1800. Miss Pollock

284. **Pupil-personnel Administration.** I. 2 Hrs. Pupil accounting, guidance, extra-curricular activities, and control. PR: Ed. 106. Open only to seniors and graduates. Mr. Allen

285. **The Junior High School.** II. 2 Hrs. PR: Ed. 106. Open only to seniors and graduates. Mr. Hudelson

291. **Exploratory Reading.** I, II. 2 Hrs. For any teachers or administrators who feel the need for a wide acquaintance with books. The work is planned to meet the individual needs of students. Miss Pollock

294. **Organization of Industrial Arts.** I. 2, Hrs. An advanced course. Preparation of comprehensive programs of industrial arts at all scholastic levels. Mr. Allen

Graduate Division

304. **Remedial Techniques in Elementary School Subjects.** 2 Hrs.

305. **The County Educational Clinic.** 2 Hrs.

306. **The Supervision of Geography.** 2 Hrs.

307. **The Supervision of Health and Safety Programs in the Elementary Schools.** 2 Hrs.

308. **Psychology of Arithmetic.** 2 Hrs. Mr. Wheat

309. **Psychology of Reading.** 2 Hrs. Mr. Wheat

316. **Psychology of Elementary School Subjects.** Mr. Wheat

322. **Organizing Programs of Audio-visual Instruction.** 2 Hrs. PR: Ed. 221. An advanced course dealing with problems of planning extensive programs of using movie, talkie, radio, slides, charts, exhibits, etc., for instructional purposes. Mr. Allen

326. **Practice in the Supervision of Elementary-school Instruction.** 2 to 3 Hrs. PR or parallel: Ed. 316 and Ed. 246. Mr. Wheat

327. **Demonstration and Practice in the Supervision of Secondary-school Instruction.** 2 to 3 Hrs. PR: Consent of instructor. An opportunity to observe approved processes in classroom supervision and to practice, under guidance, the art of improving classroom instruction. Mr. Hill

335. **The Elementary-school Curriculum.** 3 Hrs. Mr. Wheat

336. **The Secondary-school Curriculum.** I. 2 Hrs. Mr. Hudelson

339. **Public-school Organization and Administration.** I. 2 or 3 Hrs. An orientation course for present and prospective school administrators, with emphasis upon the problems which grow out of the county unit. Required as a basic course of all who specialize in educational administration. PR: 20 hours of Education and consent of instructor. Mr. Baldwin

340. **Public-school Finance.** II. 2 or 3 Hrs. PR or parallel: Ed. 339 and consent of instructor. Mr. Baldwin

341. **School Buildings and Equipment.** I. 2 Hrs. PR or parallel: Ed. 339 and consent of instructor. Mr. Baldwin

343. **School Surveys.** 2 Hrs. Development of the educational survey as an instrument for improving educational procedures. PR or parallel: Ed. 339 and consent of instructor. Mr. Baldwin

344. **Staff-personnel Administration.** II. 2 Hrs. Selection, induction, direction, evaluation, improvement, and promotion of members of the supervisory, instructional, research, clerical, and maintenance staffs. PR or parallel: Ed. 339 and consent of instructor. Mr. Baldwin

346. **Principles of Supervision.** II. 2 Hrs. Basic; general principles of elementary-school, junior high-school, and senior high-school supervision as applied to sifted content of each subject. Mr. Cook

353. **The Secondary-school Principal.** II. 2 to 3 Hrs. Open only to graduate students in Education with teaching experience in high school. Mr. Hudelson

356. **The Elementary-school Principal.** 2 to 3 Hrs. PR or parallel: Ed. 316 and Ed. 339. Mr. Wheat

357. **Organization of Programs in Vocational Education.** 2 Hrs. Specific consideration of the development of practical training in agriculture, home economics, industry, and commerce with particular reference to their common elements and interdependence. The contribution in method and set-up which vocational education has made to current emergency programs. Mr. Allen

360. **Problem in Education.** I, II. 3 Hrs. One of the alternative requirements for the Master's degree in Education. (See Thesis or Option, below). Staff

362. **Thesis in Education.** I, II. 6 Hrs. One of the alternative requirements for the Master's degree in Education. (See Thesis or Option, below). Staff

367. **Teaching the Social Studies in Elementary and Secondary Schools.** 2 Hrs. Mr. Cook

372. **Statistical Methods in Education.** I. 2 Hrs. PR: 20 hours of Education, including Ed. 112 or equivalent. Mr. Hudelson

373. **Basic Cource in Principles and Practices of Guidance.** 2 Hrs. Overview of an adequate guidance service. Ed. 271s, given in summer 1945, 1946, and Ed. 252 may be used for this.

374. **Counseling Techniques.** 2 Hrs. Study of and practice in techniques of counseling. Ed. 271s (2), summer 1946, may be counted for this.

375. **Individual Inventory Techniques.** 2 Hrs. Tests, cumulative records, standards of achievement, and other means of individual measurement to interpret students' individual aptitudes. PR: Ed. 373, 374.

376. **Occupational Information Techniques.** 2 Hrs. Surveys and analyses to determine the needs, possibilities, and requirements of specific employment.

377. **Special Counseling Problems.** 2 Hrs. Individual or group problems, chosen by the students and approved by the instructor, will be pursued through guided reading, observation, and discussion. PR: Ed. 375, 376.

390. **Advanced Course for Teachers of English.** 2 Hrs. PR: Consent of instructor. Miss Pollock

392. **Materials for General Reading.** II. 2 Hrs. Study of materials for secondary schools and for adult classes. PR: Ed. 291. Miss Pollock

399. **Techniques of Educational Research.** II. 2 Hrs. PR or parallel: Ed. 372. Mr. Hudelson

Optional Routes Toward a Master's Degree with a Major in Education

A. Thirty semester hours, including six semester hours of research (Education 362, Thesis) and the remaining hours in approved course work. Examination (oral, written, or both, at the discretion of the individual members of the committee) by the candidate's advisory committee.

B. Thirty semester hours, including three semester hours on a problem (Ed. 360, Problem) satisfactory to the adviser only, and 27 semester hours of approved course work. Examination (oral, written, or both, at the discretion of the individual members of the committee) by an advisory committee of three from the College of Education.

C. Thirty-six semester hours, including a minimum of 10 semester hours of approved course work outside the field of Education. A maximum of six semester hours may, by prior written agreement with adviser and Graduate Council, be accepted from an approved institution other than West Virginia University, provided the total of all work for the Master's degree by extension and from another institution shall not exceed 15 semester hours. Examination (oral, written, or both, at the discretion of the individual members of the committee) by a committee of at least three, one or more of whom shall represent fields other than Education.

Special Requirements for the Completion of Graduate Degrees in Education

Curriculum: At least 10 of the required 30-36 hours of approved graduate work shall be in Education; and the combined undergraduate and graduate curriculum shall contain a minimum of 30 semester-hours of Education.

GRADUATE PROFESSIONAL CURRICULA

Requirements for Admission to Graduate Work in Education

1. General requirements for admission to the Graduate School.
2. First-class teaching certificate or at least 14 hours of undergraduate credit in Education.

The Curriculum for Superintendents Leading to the Degree of Master of Arts

Required for Master's degree ..... 22 Hours

Ed. 231. Philosophy of Education, OR Ed. 233, Educational Sociology
Ed. 246. Principles of Supervision
Ed. 316. Psychology of Elementary-school Subjects
Ed. 326. Practice in the Supervision of Elementary-school Instruction
Ed. 335. The Elementary-school Curriculum, OR Ed. 336, The Secondary-school Curriculum
Ed. 339. Public-school Organization and Administration

Ed. 340. Public-school Finance
Ed. 353. The Secondary-school Principal
Ed. 356. The Elementary-school Principal
Ed. 372. Statistical Methods in Education
Ed. 399. Techniques of Educational Research

Electives in Education for Master's degree (to be chosen with adviser's approval) ..... 4 Hours

Ed. 203. Organization and Administration of Adult Education, OR Ed. 357, Organization and Administration of Vocational Education
Ed. 341. School Buildings and Equipment, OR Ed. 343, School Surveys, OR Ed. 344, Staff Personnel Administration
Ed. 360. Problem in Education or Thesis

Other electives for Master's degree (to be chosen with adviser's approval) ..... 2-8 Hours

Total for Master's degree .....30-36 Hours

NOTE:—For those who already hold a Master's degree and who wish to qualify for the University's recommendation for a Superintendent's Certificate, the following courses listed above will satisfy:

Required ..... 16 Hours
General Administration: Ed. 339; 340; 203 or 357; 341 or 343 or 334 .....4-8 Hrs.
Elementary-school Administration: Ed. 326 and 356 ..... 4 Hrs.
Secondary-school Administration: Ed. 246; 327; 353 ..... 4 Hrs.
Electives ..... 4 Hours
Ed. 284; 335; 336; 344; 372

Other requirements for the Superintendent's Certificate are 5 years' experience in the public schools of West Virginia, 3 of which shall have been as principal of either high school or elementary school or as superintendent or assistant superintendent in county and/or district in West Virginia; and a health certificate.

Since most of the courses listed above have prerequisites, the consent of the instructor must be obtained before enrollment.

The Curriculum for High-School Principals Leading to the Degree of Master of Arts[1]

Required for Master's degree ..... 14 Hours

1. High-school Administration
   - **Ed. 339. Public-school Organization and Administration ..... 2 Hrs.
   - **Ed. 353. The Secondary-school Principal ..... 2 Hrs.
2. Supervision of High-school Instruction
   - **Ed. 246. Principles of Supervision ..... 2 Hrs.
   - **Ed. 327. Demonstration and Practice in the Supervision of Secondary-school Instruction .... 2 Hrs.
3. Other Required Courses for Master's degree:
   - Ed. 336. The High-school Curriculum
   - Ed. 372. Statistical Methods

[1]Completion of this curriculum also fulfills the scholastic requirements for certification in West Virginia as a high-school principal. Other requirements for the high-school principal's certificate are (1) graduation from a standard college or university and qualifications for a first-class high-school teaching certificate; (2) three years of secondary-school teaching experience; and (3) a health certificate. Since most of the courses listed above have prerequisites, the consent of the instructor must be obtained before enrollment.

**Required for recommendation for High-school Principal's Certificate.

*Approved electives to complete the 14 semester hours required for recommendation for the High-school Principal's Certificate.

Electives for Master's degree (from other graduate courses in Education or from other fields by permission of adviser) .....16-22 Hours

Suggested electives in Education for Master's degree:

*Ed. 231. Philosophy of Education or
*Ed. 233. Educational Sociology
*Ed. 281. History of Elementary and Secondary Education in the United States
*Ed. 284. Pupil-personnel Administration
*Ed. 357. Organization of Programs in Vocational Education
*Ed. 360. Problem in Education or Thesis
*Ed. 399. Techniques of Educational Research

Total for Master's degree .....30-36 Hours

The Curriculum for Elementary-School Principals Leading to the Degree of Master of Arts[2]

Required for Master's degree ..... 14 Hours

1. Elementary-school Administration
   **Ed. 339. Public-school Organization and Administration ..... 2 Hrs.
   Ed. 356. The Elementary-school Principal ..... 2 Hrs.
2. Supervision of Elementary-school Instruction
   **Ed. 246. Principles of Supervision ..... 2 Hrs.
   Ed. 326. Practice in the Supervision of Elementary-school Instruction ..... 2 Hrs.
3. Other required courses for Master's degree:
   **Ed. 316. Psychology of Elementary-school Subjects. (Ed. 308 and 309 may be substituted.) .... 2 Hrs.
   *Ed. 335. The Elementary-school Curriculum ..... 2 Hrs.
   *Ed. 360. Problem in Education or Thesis (dealing with a phase of elementary-education.) .. 2 Hrs.

Electives for Master's degree (approximately half in academic fields) to be chosen with approval of adviser .....16-22 Hours

Suggested Electives in Education:

*Ed. 221. Audio-visual Instruction ..... 2 Hrs.
*Ed. 291. Exploratory Reading ..... 2 Hrs.
*Ed. 372. Statistical Methods in Education ..... 2 Hrs.
*Ed. 399. Techniques of Educational Research ..... 2 Hrs.

Total for Master's degree .....30-36 Hours

[2]Completion of this curriculum also fulfills the Education requirements for the elementary-school principal's certificate. Other requirements are (1) three years of elementary-school teaching experience; and (2) a health certificate. Since most of the courses listed above have prerequisites, the consent of the instructor must be obtained before enrollment.

**Required for recommendation for Elementary Principal's Certificate.

*Approved Electives to complete the 14 semester hours required for recommendation for the Elementary Principal's Certificate.

The Curriculum for Secondary-School Classroom Teachers Leading to the Degree of Master of Arts

Required:

Graduate courses in Education ..... 10-20 Hours
Suggested courses ..... 12 Hours
Ed. 203. Adult Education
Ed. 222. Current Practices
Ed. 231. Philosophy of Education
Ed. 291. Exploratory Reading
Ed. 336. The Curriculum
Ed. 335. The Elementary-school Curriculum
Ed. 360. A Problem in Education OR Thesis
Graduate courses in a recognized teaching field
Required ..... 10-20 Hours
Graduate courses in tributary or supplemental fields
Required ..... 0-10 Hours

Total ..... 30-36 Hours

All courses are to be selected by the candidate subject to the approval of his adviser so as to fulfill the above requirements.

The Curriculum for Elementary-School Classroom Teachers Leading to the Degree of Master of Arts

Required:

Ed. 316. Psychology of Elementary-school Subjects
(Other approved courses in this field, e.g., Ed. 308, and/or Ed. 309, may be substituted for Ed. 316.)
Ed. 335. The Elementary-school Curriculum
Ed. 360. A Problem in Education or Thesis

Electives in academic fields (to be chosen with adviser's approval)—12 hours required

Free electives (in Education or academic fields) to complete a total of 30-36 hours (to be chosen with adviser's approval)

Total, 30-36 Hours

The Curriculum Leading to the Degree of Master of Science in Home-Economics Education

Required:

Graduate courses in Education ..... 10-20 Hours
Graduate courses in home economics ..... 10-20 Hours
Graduate courses in tributary fields ..... 0-10 Hours

Total ..... 30-36 Hours

The Curriculum for Teacher-Counselor Leading to the Degree of Master of Arts[3]

Required for Master's degree ..... 12 Hours
- Ed. 284. Pupil-personnel Administration
- Ed. 373. Basic Course in Principles and Practices of Guidance
- Ed. 374. Counseling Techniques
- Ed. 375. Individual Inventory Techniques
- Ed. 376. Occupational Information Techniques
- Ed. 377. Special Counseling Problems

Approved electives ..... 12 Hours
- Econ. 240. Labor Relations
- Econ. 245. Personnel Administration
- Soc. Work 212. Field-work Observation
- Soc. Work 220. The Field of Social Work
- Soc. Work 251. Introduction to Social Work
- Soc. Work 260. Problems of Child Welfare
- Soc. 210. Marriage and the Family
- Soc. 233. Problems of Crime and Delinquency
- Ed. 258. Education for Special Groups
- Ed. 372. Statistical Methods in Education
- Ed. 360, 362. Problem or Thesis

Free electives ..... 6-12 Hours

Total for Master's degree .....30-36 Hours

The Curriculum for Counselor Leading to the Degree of Master of Arts[4]

Required courses for Master's degree ..... 16 Hours
- Same as required for Teacher-counselor with following additional:
- Ed. 212. Techniques of Evaluation

OR

- Ed. 372. Educational Statistics
- Ed. 258. Education for Special Groups

Approved electives ..... 12 Hours
- Same as for Teacher-counselor

Free electives ..... 2-8 Hours

Total for Master's degree .....30-36 Hours

[3]Completion of this curriculum also fulfills scholastic requirements for certification in West Virginia for a Teacher-counselor Certificate. Other requirements are (1) a first-class teaching certificate at the level at which guidance is to be done; and (2) two years' successful teaching experience at the level at which guidance is to be done.

[4]Completion of this curriculum also fulfills the scholastic requirements in West Virginia for a Counselor's Certificate. Other requirements are (1) a first-class teaching certificate at the level at which the guidance is to be done; (2) 2 years' of successful teaching experience at the level at which the guidance is to be done; and (3) cumulative wage-earning experience to a total of no less than 1400 clock hours of regular paid employment, as certified by the employer or employers, in agriculture, commerce, and industry, or 16 weeks in a cooperative work-experience counselor-training program.

The College of Engineering and Mechanic Arts

The School of Mines

ORGANIZATION

The College of Engineering and Mechanic Arts

For the purpose of administration and instruction, the College of Engineering and Mechanic Arts is organized into the following departments:

The department of aeronautical engineering (A. E.)
The department of chemical engineering (Ch. E.)
The department of civil engineering (C. E.)
The department of electrical engineering (E. E.)
The department of mechanical engineering (M. E.)
The department of mechanics (M.)

The School of Mines

All the mining and industrial extension work of the University is organized under the School of Mines. For the purpose of administration the school is divided into the following divisions:

The department of mining engineering (E. M.)
The department of mining and industrial extension.

THE COLLEGE OF ENGINEERING

The purpose of the College of Engineering and Mechanic Arts is to instruct students in the fundamental sciences and arts upon which all engineering rests and to impart such special and technical knowledge of the various branches of engineering as will enable its graduates to enter them and maintain themselves while gaining their professional experience. To accomplish this purpose the work of the college is classified under the following curricula: aeronautical engineering, chemical engineering, civil engineering, electrical engineering, and mechanical engineering. For those students desiring a broader training than is offered in the four-year curricula, a five-year course may be taken leading to two degrees.

The work of the first year is common in aeronautical, chemical, civil, electrical, and mechanical engineering. This is also true for mining engineering, which is taught in the School of Mines. Because of this common course, the student may postpone his choice of engineering branch until the end of the first year. By that time he becomes sufficiently acquainted with the various fields to make a wiser selection than would be possible on first entering college. In the second year differentiation starts, increasing year by year.

The course in aeronautical engineering is intended to give the student fundamental training in engineering together with special training and instruction in aeronautical and related subjects. By a judicious selection of electives in the senior year, the student may prepare himself for the field of aeronautical design and research or he may prepare himself for the opera-

tional field of aeronautics. Flight training is required in the summer following the second year. This together with special instruction already received makes it possible for the student to pass the C.A.A. examination for a private pilot's certificate.

The object of the chemical engineering curriculum is to qualify students to design, build, and manage manufacturing plants, in which the products of manufacture are based on chemical processes, and to fit them for professional employment as industrial chemists and chemical engineers. In addition to many courses which are required of all students, two options are offered in the upper-class work—one in metallurgy and the other in the field of ceramics.

The course in civil engineering is planned to give the student a substantial foundation in the fields of highway, railway, sanitary, municipal, structural, and hydraulic engineering. The field of civil engineering is one of the broadest of engineering professions, and yet the work of the civil engineer rests upon a relatively compact body of scientific principles. In the third and fourth years the student has a choice between a general civil engineering option and a sanitary engineering option. If he takes the civil engineering option he may choose between work in hydraulic engineering and in highway engineering.

The course in electrical engineering has for its purpose a general training in engineering fundamentals together with special training in either the field of electrical power development and utilization, or in the field of electrical communication and the application of electronic devices to industrial and other uses. Since it is impossible to cover both fields adequately in one course, the student is offered a choice of two options. One is a power option and the other is a communication option. The content of the two options diverges in the third and fourth years, where the work is of a more technical and professional character. In the fourth year of either option the student has a choice of six hours of electives, and by a proper choice of these, the student may either broaden his training or he may specialize further in his chosen field.

Mechanical engineering deals essentially with the design and construction of machinery, the development and utilization of power, and the production in industry. To this end the student takes a considerable amount of shop work in addition to the theoretical courses in the fundamental sciences of mathematics, chemistry, and physics. In the upper-class work attention is given to machine design, power-plant design, refrigeration, heating and ventilation, as well as to production methods and industrial management. In the senior year, electives in aeronautical engineering more than meet the civil-service requirements in that field.

THE SCHOOL OF MINES

The School of Mines, established at the University in 1926, was given a degree-granting status in July, 1930. For administrative purposes the School of Mines is divided into two departments: (1) the department of mining engineering, and (2) the department of mining and industrial extension. The department offices, laboratories, classrooms, museum, and model rooms are located in the Mineral Industries Building.

Resident Instruction

The School of Mines offers (1) a four-year course leading to the degree of Bachelor of Science in Engineering of Mines, with options in coal mining and oil and gas engineering; and (2) a combined science and engineering course, extending over five years, leading to the degree of Bachelor of Science (at the end of the fourth year) and Bachelor of Science in Engineering of Mines (at the end of the fifth year). The work in mining engineering is based on fundamental instruction in the development, production, distribution, and utilization of coal, petroleum, and natural gas.

THE ENGINEERING EXPERIMENT STATION

W. A. KOEHLER, Acting Director

The chief functions of the Engineering Experiment Station are the encouragement and prosecution of research and investigations that will enhance the industrial and economical welfare of the people of West Virginia; original contributions to the fundamental principles and knowledge along scientific and engineering lines, and the stimulation and training of graduate students in research activities. The research undertaken by the Station therefore is primarily concerned with investigations in the production, processing, and utilization of the natural resources of West Virginia; investigations that will aid the existing industries of the state and promote the development of new industries; and investigations that will aid in the planning, design, and development of the public works of the state. As a consequence of this program, the subjects receiving particular attention by the staff of the Station are coal, oil, gas, clays, stone, sand, timber, water, steam and electric power, sewerage, sanitation, road building, transportation, aeronautics, and communications.

The Station will assist in compiling surveys and in conducting investigations of the industrial requirements and possibilities of any region or community in the state. It cooperates with the West Virginia Agricultural Experiment Station, the State Road Commission, the State Geological Survey, the State Department of Health, the national engineering societies, and state or national agencies whose assistance may promote the more effective fulfillment of the Station's functions.

To aid industrial organizations in this state that lack facilities and personnel to undertake important research investigations which arise in the development of their operations, the Station stands ready, where time and facilities permit, to assist in the prosecution of investigations on their fundamental problems. Such advisory services are free, but any special equipment, materials, or labor that may be needed must be supplied by the organization for which the work is done. Several companies and technological associations have sponsored research fellowships in the Station.

The staff of the Station includes part-time services of several of the teaching members of the faculties of the College of Engineering and of the School of Mines, as well as a few full-time research engineers and chemists and part-time graduate student research assistants.

The results of the studies, surveys, investigations, and researches of the Experiment Station are published in bulletin form. Two series of bulletins

are issued; to date there are 21 numbers in the Research Series and 23 in the Technical Series. The Technical Bulletins contain selected papers from the Proceedings of the Annual State Water Purification Conferences, the State Coal Conferences, and the Appalachian Gas Measurement Short Courses. A list of publications and copies of the bulletins may be obtained upon application to the Director of the Engineering Experiment Station.

MINING AND INDUSTRIAL EXTENSION

The department of mining and industrial extension in the School of Mines conducts courses of instruction in practical subjects in various sections of the state where groups of individuals wish to study and receive training in subjects pertaining to their every-day work. The department also aims to disseminate useful knowledge which has been amassed by research studies at the University to all classes of citizens in the state, and in this way to bring the University and its opportunities for learning to various groups of students who desire to enroll in its extension department.

The Short Course in Coal Mining:

The Short Course in Coal Mining offered by the department of mining and industrial extension gives an opportunity to operators, officials, and employees of mining companies to obtain instruction pertaining to their work. The subjects covered in the short course are: explosives, methods of mining, timbering, mine gases, mine ventilation, hoisting, haulage, mine drainage safety lamps, mine management, electricity in mines, mine fires and explosions, safety organization and administration, mining arithmetic, and elementary drawing.

Special attention is given to students desirous of preparing themselves for the teaching of mining classes under the Smith-Hughes and George-Dean Acts.

At the close of the short course the West Virginia Department of Mines conducts an examination for mine foremen and fire bosses. Tuition is free.

The thirty-fifth annual session of the Short Course in Coal Mining will begin on Monday, June 9, and continue until Saturday, July 19, 1947. For further information, write for the special announcement of the Short Course in Coal Mining.

The Short Course in Gas Measurement:

The first Appalachian Gas Measurement Short Course was conducted in 1938 by the University in cooperation with the Public Service Commission of West Virginia, the West Virginia Oil and Natural Gas Association, the American Gas Association, and public utilities and industries producing, selling, or consuming natural gas in large quantities in West Virginia and surrounding states. This course provides instruction in the theory and practice of gas measurement and pressure regulation and is designed to be of interest to executives and officials of gas companies as well as to metermen. The course covers a period of three days and is usually held during the third week of August each year.

Vocational Courses Offered in Extension:

Courses in foreman training and other special courses for those in industry

are offered in centers where there is sufficient interest. The services of the Department are available for any city or town desiring to establish night schools and part-time schools.

Extension courses in mining are offered under the direction of the University at various mining towns throughout the state. The instruction in these courses is carried on by University extension instructors who visit each center every week. At the present time the work is planned on a four-year basis to cover the following courses: mine gases, safety lamps, ventilation, timbering, explosives, haulage, prevention of mine accidents, mine waste, drainage and pumping, mining methods, foremanship, electricity, mine fires and explosions, and coal geology. In each of these unit courses, particular emphasis is placed on safety features, state mining laws, and application of arithmetic to mining problems.

An intensive course for the training of mine foremen in cooperation with the Federal Board of Vocational Education is also offered in certain sections of the State.

Fire Service Extension School:

An annual training school for firemen is conducted each year in cooperation with the State Fire Marshal, the National Board of Fire Underwriters, and the West Virginia Inspection Bureau. This school is conducted under the supervision of R. E. Hanna, Jr., instructor in Fire Service Extension Schools. Extension courses in fire-department evolutions, fire protection, and fire prevention are offered under the direction of the University in cooperation with the State Fire Marshal at various fire departments in West Virginia. The instruction in these courses is carried on by local University extension instructors in the various departments. The classes meet once each week for approximately 30 weeks and cover the following subjects: motor equipment, pumps, hose, ropes, ladders, rescue, attack and extinguishment, salvage, ventilation, gases, inspection, overhauling, and minor equipment. Approximately one-fifth of the time is spent on actual fire-department evolutions.

Oil and Gas Extension Classes:

Extension classes for employees of the oil and gas industries are offered at various centers throughout the state by the Mining and Industrial Extension Department of the School of Mines. The classes are organized in September of each year and meet once each week for a period of approximately nine months. The instruction is divided into three years' work as follows: First Year — mathematics, physics, and applied mechanics; Second Year — fluid mechanics, oil and gas transmission, gas measurement, pressure regulation, and control; Third Year—combustion and utilization of gas, oil and gas geology, and principles of industrial management. Fourth Year—geology, economics, and prime movers.

The Coal Conference on Combustion:

Since 1937, the School of Mines has sponsored each year an annual Coal Conference at Morgantown. These conferences have been devoted to the study of the problems incident to the marketing and utilization of coal and to the promotion of research investigations that may assist in the retention and expansion of coal markets. The annual Coal Conference will again be held at Morgantown in 1947; dates will be announced later.

Water Purification Conferences:

An annual conference on water purification is held each year in cooperation with the State Department of Health. A number of out-of-state engineers are invited to present papers at the conference. The State Department of Health and College of Engineering cooperate in the program. These conferences are held under the supervision of H. W. Speiden.

Electric Meter Conferences:

Conferences for men interested in the metering of electrical energy will be arranged to suit the convenience of those interested. Each group should consist of from eight to twelve men who have at least a working knowledge of elementary algebra and trigonometry. Conferences may be arranged by writing to Professor A. A. Hall and are usually expected to be for 10-day periods devoted to current practices as well as to the basic theory of electrical meters, their connections and testing.

Mine Electrician's Conference:

Conferences for men engaged in the application of electrical energy to the mining industry will be arranged for at certain times, in connection with the department of electrical engineering, when such work does not conflict with the regular University classes. Such groups should consist of not less than ten or more then fifteen men who should have at least a working knowledge of arithmetic and elementary electrical laws. Conferences may be arranged for by writing to Prof. C. T. Holland, Assistant Director of Mining Extension, and are expected to be from three- to five-day periods of class study and laboratory work in the department of electrical engineering.

The Standing Committees

ENGINEERING SCHEDULES: Associate Professors E. C. JONES, SIMONS, and BAKER; Assistant Professor REYNOLDS.

ENGINEERING SOCIETY: Professors FORMAN, BOOMSLITER, KOEHLER, and H. M. CATHER; Associate Professor BAKER.

LIBRARY: Professor SPEIDEN, Associate Professor SEIBERT, and Instructor PIERCE.

COMMITTEE ON SCHOLARSHIP: Professors HALL and KOEHLER; Associate Professor C. H. CATHER.

REQUIREMENTS FOR DEGREES

Any student, in order to be eligible to receive a Bachelor's degree in any branch of Engineering for which degrees are offered, in addition to satisfying all entrance requirements shall be required to complete satisfactorily 144 semester hours of work as specified in the curriculum of the department leading to the degree for which the student is a candidate, plus the general requirements of physical education and military science required by the University for such a degree.

NOTE: At present the University requires of all male students, unless permanently exempted therefrom in each case, 2 semester hours of physical education and 8 semester hours of military science; and of all female students, unless permanently exempted therefrom, 4 semester hours of physical education. Students entering with 58 hours of credit are also exempted.

Substitutions

The following substitutions are regularly allowed in addition to special substitutions listed elsewhere:

Chemistry 5, 6, 106, 15 or 115 (2 to 5 hrs.) for Chemistry 10.
Chemistry 5, 10, or 105 for Chemistry 105s.
Chemistry 115 for Chemistry 15.
Chemistry 6 or 106 (5 hrs.) for Chemistry 15 and 107.
Economics 1 and 2 or 1s and 2s for Economics 103 or 30.
English 1s and 2s for either English 1 or 2.
C. E. 201 for C. E. 115 Lab.
M. E. 25 for C. E. 10.
M. E. 29 for M. E. 27.
Physics 1, 2, 3, 4, 109, and 110 for Physics 105, 106, 107, and 108.
Speech 11 for Speech 13.

Thesis

Any candidate for a baccalaureate degree in engineering may with the consent of his major professor prepare a thesis on some subject relating to a special branch of engineering or other department of applied science. It will be presented for approval first to the instructor under whose guidance it has been prepared, then to the head of the department in which the degree is to be conferred. A typewritten copy of the thesis prepared in accordance with official specifications and signed by both the instructor in charge and the head of the department, must be placed in the University library before graduation.

THE COLLEGE OF ENGINEERING CURRICULA

1. A four-year curriculum leading to the degree of Bachelor of Science in Aeronautical Engineering.

2. A four-year curriculum leading to the degree of Bachelor of Science in Chemical Engineering, with options in metallurgy and ceramics.

3. A four-year curriculum leading to the degree of Bachelor of Science in Civil Engineering, with option in sanitary engineering.

4. A four-year curriculum leading to the degree of Bachelor of Science in Electrical Engineering, with option in power and communications.

5. A four-year curriculum leading to the degree of Bachelor of Science in Mechanical Engineering, with electives in power and industrial engineering.

6. Combined science and engineering curricula extending over five or more years leading to the degree of Bachelor of Science, and Bachelor of Science in Engineering.

7. A two-year curriculum leading to the certificate as Electronic and Radio Technician.

The Freshman Schedule

In order to permit all students in the College of Engineering and the School of Mines to have a year in which to find out definitely what curriculum they wish to pursue, the first year of all engineering curricula is made uniform. To assist the student in making an intelligent choice, a series of weekly lectures is given throughout the first semester explaining the work of the several branches of engineering.

FIRST YEAR

(Identical for all engineering and mining courses)

First Semester	Hrs.	Second Semester	Hrs.
Eng. 1—Comp. and Rhet.	3	Eng. 2—Comp. and Rhet.	3
Math. 3—College Algebra	3	Math. 5—Analytical Geom.	4
Math. 4—Plane Trig.	3	Chem. 2—Inorganic Chem.	4
Chem. 1—Inorganic Chem.	4	Mil. 2—Military Science	2
Mil. 1—Military Science	2	P. E. 2—Ser. Prog. (Men)	1
P.E. 1—Ser. Prog. (Men)	1	C. E. 1—Surveying	2
M. E. 20—Mechanical Drawing	3	M. E. 26—Descriptive Geom.	3
G. 1—Engineering Lectures			
	19		19

Aeronautical Engineering

The curriculum in aeronautical engineering is designed to give the student a general training in engineering fundamentals and specialized training in either of two fields according to the student's choice. The options offered are aerodynamic and structural design (Option I) and aircraft power plants (Option II). While the primary objective of Option I is to provide training in the aerodynamic and structural design of the airplane and that of Option II is to provide training in aircraft power plants, it is possible for the student to enter other specialized fields by selecting appropriate electives and by acquiring the proper supplementary experience.

The two options are of the same course content through the third year except for a difference of one course in the second semester of the third year. Those students selecting Option I take basic airplane structures at this time, while those selecting Option II take internal cumbustion engines.

In the fourth year the courses are of a specialized nature governed by the particular option selected.

The fact that the University has its own planes and a hangar at the Morgantown Municipal Airport is an advantage in that it makes possible flight instruction as well as adequate instruction in the maintenance and repair of aircraft equipment and affords an opportunity for the detailed study of aircraft and its component parts. Flight training, though not required, is recommended for students planning to become aeronautical engineers.

Curriculum in Aeronautical Engineering

Leading to the Degree of Bachelor of Science in Aeronautical Engineering

FIRST YEAR· See Curriculum above.

SUMMER SESSION FOLLOWING FIRST YEAR

	Hrs.
M. E. 7s—Welding and Heat Treatment	1
M. E. 11—Machine Shop	2
A. E. 15—Aircraft Repair and Maintenance	2
	5

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Phys. 105—G. Physics	4	Phys. 106—G. Physics	4
Phys. 107—G. Physics Lab.	1	Phys. 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Science and Tactics	2	Mil. 4—Science and Tactics	2
Econ. 30—Fund. of Economics	3	M. 101—Statics	3
Speech 11—Effective Speaking	3	M. E. 27—Mechanism	2
		A. E. 16—Elementary Aerodynamics	3
	17		19

THIRD YEAR

First Semester	Hrs.	Second Semester	Hrs.
M. 102—Mechanics of Matls.	4	E. E. 103—Elements of E. E.	4
M. 103—Matls. Testing Lab.	1	A. E. 222—Aircraft Propulsion	2
M. E. 221—Thermodynamics	3	M. E. 122—Mechanical Lab.	2
Math. 253—Adv. Math. for Engrs.	3	A. E. 202—Aerodynamics	3
M. 104—Kinetics	3	C. E. 115—Fluid Mechanics	3
E. E. 102—Elements of E. E.	4	A. E. 210—Basic Airplane Struct. (Option I)	3
G. 101—Eng'g. Society	½	M. E. 229—Int. Comb. Engines (Option II)	3
		G. 102—Eng'g. Society	½
	18½		17½

FOURTH YEAR

OPTION I—AERODYNAMIC AND STRUCTURAL DESIGN

A. E. 204—Airplane Performance	2	A. E. 203—Chordwise & Spanwise Air Load Dist.	3
M. E. 113—Machine Design	4	M. E. 229—Int. Comb. Engines	2
A. E. 205—Experimental Aero	2	A. E. 212—Airplane Design	3
A. E. 211—Structural Design of Metal Airplanes	4	A. E. 213—Airplane Struct. Lab.	1
Ch. E. 227—Aircraft Structural Materials	2	G. 110—Business Law	3
Electives	5	Electives	7
G. 103—Eng'g. Society	½	G. 104—Eng'g. Society	½
		Inspection Trip	
	19½		19½

*OPTION II—AIRCRAFT POWER PLANTS

Ch. E. 227—Aircraft Structural Materials	2	A. E. 223—Aircraft Engine Design	3
A. E. 205—Exp. Aero.	2	A. E. 225—Aircraft Engine Lab.	2
A. E. 210—Basic Airplane Struct.	3	G. 110—Business Law	3
A. E. 221—Aircraft Engines	3	Electives	11
M. E. 113—Machine Design	4	G. 104—Engineering Society	½
Electives	5	Inspection Trip	
G. 103—Engineering Society	½		19½
	19½		

* To be omitted until there is adequate student demand.

ELECTIVES IN AERONAUTICAL ENGINEERING

A. E. 101—Flight Training 1
A. E. 102—Flight Training 1
A. E. 124—Thesis .....2 to 5
A. E. 241—Air Navigation 2
C. E. 120—Matls. of Const. 2
C. E. 201—Hydr. Measurements .. 1
Ch. E. 211—Fuels and Comb. ..2 or 3
E. E. 274—Indus. Applications of Electric Control 3
A.E. 120—Aviation Gr. School.... 2
A.E. 121—Adv. Flight Training... 1
A.E. 123—Adv. Flight Training .. 1
Geog. 107—Global Geography 3
Geol. 12—Meteorology 3
Modern language 6
Advanced math., mechanics, or physics .....3 to 8
Mil. 105-108 .....1 to 6
M. E. 203—Advanced Machine Design 4
M. E. 205—Industrial Engineering 3
Physiol. 215—Aviation Physiol. .. 1

Chemical Engineering

The standard four-year course in chemical engineering has been developed to qualify young men for positions in operation, design, construction, and management of manufacturing plants in which the raw materials are subjected to chemical changes and processes to produce the finished products. This curriculum (page 23) includes fundamental courses: in mathematics—through calculus; in chemistry—inorganic, analytical, organic, and physical; in physics; in basic engineering—surveying, mechanical drawing, mechanism, mechanics, strength of materials, and fluid flow; in heat and power engineering; in electrical engineering; in mineralogy and metallurgy; in chemical engineering—principles, calculations, thermodynamics, design, unit operations, unit organic processes, heat transfer, and economics; in electro-chemical industries, inorganic, and organic technology. This curriculum provides the student with a broad foundation in the fundamental principles of those subjects which wide experience has shown are essential for a successful career in the chemical engineering profession; or as engineers in any industry involving a succession of individual or unit operations.

To complete the requirements for the B. S. Ch. E. degree in four years, students should follow the curriculum as outlined, taking all required shop courses and qualitative analysis in the summer session; also, it is definitely advisable to take Physical Chemistry 260 and 261 in the Summer Session before the third year. Modifications in the standard chemical engineering curriculum for the ceramic and metallurgy options are outlined below.

Students preparing to take chemical engineering should present for entrance as many units as possible in mathematics, chemistry, and physics; also units in German, French, or Spanish. While certain basic courses in English, economics, and public speaking are required in the regular Ch. E. curriculum, a student will obtain a broader education in economics, history, language, science, applied technology, and engineering by taking the combined Bachelor of Science and Chemical Engineering course. By a careful selection of electives both degrees may be earned in five years.

Ceramics Option—Chemical engineering and ceramics have many basic concepts and engineering principles in common. Students selecting the ceramics option can obtain all required courses in chemical engineering and should take the following as their senior electives: Ch. E. 230 (3 hrs.), Ch. E. 232 (2 hrs.) and Ch. E. 233 (2 hrs.). Students showing marked ability in ceramics may select Ch. E. 124 (2 hrs.) in place of either of the latter two courses.

Most students graduating with ceramic option complete more than the required number of hours, hence should preferably take also Ch. E. 211 (2 or 3 hrs.) and Ch. E. 231 (2 hrs.).

Metallurgy Option—The metallurgical industries apply many of the uint operations and fundamental principles studied in the chemical engineering curriculum. Students selecting the metallurgy option should take Ch. E. 222 (2 hrs.) and Ch. E. 223 (3 hrs.), and should preferably also take Ch. E. 211 (2 or 3 hrs.) and Ch. E. 213 (2 hrs.) and Ch. E. 232 (2 hrs.). Students having special aptitude in metallurgy may take Ch. E. 124 (2-5 hrs.). By taking these elective courses the student should be well prepared to begin his career in a metallurgical industry.

Curriculum in Chemical Engineering

Leading to the Degree of Bachelor of Science in Chemical Engineering

FIRST YEAR: See Curriculum on page 200

SUMMER SESSION FOLLOWING FIRST YEAR

	Hrs.		Hrs.
M. E. 7—Welding and Heat Treat.*	1 hr.	Chem. 105s—Qual. Anal.	2
M. E. 11—Machine Work	2		

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Phys. 105—G. Physics	4	Phys. 106—G. Physics	4
Phys. 107—G. Physics Lab.	1	Phys. 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Military Science	2	Mil. 4—Military Science	2
Chem. 15—Quant. Analysis	3	Chem. 107—Quant. Analysis	2
Speech 13—Effective Speaking	2	E. M. 106—Mineralogy	1
Econ. 30—Fund. of Economics	3	M. 101—Statics	3
		M. E. 27—Mechanism	2
	19		19

THIRD YEAR

Chem. 233—Organic Chem.	5	Ch. E. 201—Unit Organic processes	3
Chem. 260—Physical Chem.	3	Chem. 261—Physical Chem.	3
Ch. E. 205—Elements of Ch. E.	3	Ch. E. 105—Chem. Eng'g. Design	2
Ch. E. 206—Eng'g. Chem. Lab.	1	Ch. E. 208—Chem. Eng'g. Lab.	2
E. M. 202—Coal Lab.	1	M. E. 220—Heat and Pow. Eng'g.	3
M. 102—Mech. of Materials	4	M. 104—Kinetics	3
Ch. E. 109—Ch. E. Economics	2	C. E. 115—Fluid Mechanics	2
G. 101—Engineering Society	½	G. 102—Engineering Society	½
	19½		18½

FOURTH YEAR

Ch. E. 204—Chem. Eng'g. Calc.	2	Ch. E. 203—Ch. E. Thermodynamics	2
Ch. E. 207—Prin. Chem. Eng'g.	2	Ch. E. 210—Electrochem. Ind.	3
Ch. E. 209—Chem. Eng'g. Lab.	2	Ch. E. 215—Organic Chem. Techn.	2
Ch. E. 214—Inorganic Chem. Techn.	2	Ch. E. 216—Chem. Eng'g. Design	2
Ch. E. 220—Metallurgy	2	Ch. E. 219—Prin. Chem. Eng'g.	2
Ch. E. 221—Metallurgy Lab.	1	G. 104—Engineering Society	½
E. E. 110—Elements of E. E.	5	Electives—(see below)	6
G. 103—Engineering Society	½	Inspection Trip	
Electives—(see below)	1		
	17½		17½

*Recommended for students taking metallurgy option.

ELECTIVES IN CHEMICAL ENGINEERING

Ch. E. 124—Thesis .....2 to 5
Ch. E. 202—Water Exam. and Purif. 2
Ch. E. 211—Fuels and Combust. .....2 to 3
Ch. E. 217—Evapn. & Distiln. 2
Ch. E. 218—Adv. Chem. Eng'g Design 2
Ch. E. 222—Non-Ferrous Metallurgy 2
M. 103—Materials Test. Lab. 1
Ch. E. 223—Metallography 2 to 3
Ch. E. 232—Refractories 2
C. E. 122—Structural Engineering .....2 to 3
M. E. 205—Industrial Eng'g. 3
Geol. 1—G. Geology 3
German 1 and 2 6
Mil. 105-108—Adv. Military .....1 to 6

Civil Engineering

Civil Engineering includes the measurement of land surfaces and the production of maps, the design, construction, and operation of transportation facilities, the design and construction of fixed structures, sanitary and municipal engineering, and hydraulic engieering.

The measurement of land surfaces is done by some kind of surveying such as plane, topographic, or geodetic. The survey may be conducted entirely on the surface or it may combine the use of surface and aerial methods. Transportation facilities divide readily into highway, railway, water, and air groups, the work of the civil engineer being most directly concerned with the construction and maintenance of the fixed portions of the system in each case. Among the large number of fixed structures in the civil engineer's field are bridges, buildings, tunnels, subways, foundations, walls, and piers. Sanitary and municipal engineering cover the design, maintenance, and operation of water supplies, water purification plants, distribution systems, sewer systems, sewage-disposal plants, and garbage-disposal plants. Hydraulic engineering deals with the design and construction of water-power installations, dry docks, locks and dams, flood control, and irrigation projects.

The civil engineering curriculum has been planned to give broad education in those general and scientific subjects which form the foundation of all engineering, and a special training in the field of civil engineering. During the first two years emphasis is placed on subjects such as English, mathematics, chemistry, physics, mechanical drawing, and surveying. These subjects are taught, not as an end in themselves, but rather as tools for the solution of engineering problems. The teaching is done by means of recitations, laboratory work, drawing room work, and field practice. During these first two years instruction is also given in military training and physical education, which help to keep the student physically fit. In the third and fourth years the application of these basic courses is made to the solution of engineering problems. Breadth of training is furnished by courses in mechanics, economics, bacteriology, geology, electricity, and heat and power engineering. Depth of training is furnished by professional work in highway, railway, structural, sanitary, and hydraulic engineering.

The civil engineering professional field is too wide to be covered thoroughly in a four-year course. For this reason, during the latter part of the course, certain options are offered. In addition to the sanitary engineering option outlined below, the student is offered a choice between two options in the fourth year, one of which devotes more time to transportation while the other stresses hydraulic engineering.

Sanitary Engineering Option

Students in civil engineering who desire to specialize in sanitary engineering are required to make the following regular substitutions:

Fourth year: first semester: C. E. 202, Water Purification, 3 hrs., for C. E. 103. C. E. 117, Municipal Engineering, is required instead of the 2 hours of optional subjects. Second semester: C. E. 203, Sewage Disposal, 3 hrs., for C. E. 204. Ch. E. 202, Water Examination, is required instead of 2 hours of optional subjects.

Curriculum in Civil Engineering

Leading to the Degree of Bachelor of Science in Civil Engineering

FIRST YEAR: See Curriculum on page 200

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Physics 105—G. Physics	4	Physics 106—G. Physics	4
Physics 107—G. Physics Lab.	1	Physics 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Chem. 10—Quant. Analysis	2	Mil. 4—Military Science	2
Mil. 3—Military Science	2	C. E. 3—Railroad Curves	2
Speech 13—Effective Spk.	2	M. 101—Statics	3
C. E. 2—Surveying	4	Geol. 1—G. Geology	3
	19		19

C. E. 4s—Summer Surveying (five weeks) 5

THIRD YEAR

Econ. 103—Econ. and Acct.	3	Bus. 110—Acct. for Engrs.	2
M. 102—Mech. of Materials	4	C. E. 101—El. of Hwy. Eng'g.	3
M. 103—Materials Test. Lab.	1	C. E. 115—Fluid Mechanics	3
C. E. 110—Struct. Drafting	2	C. E. 121—Structural Eng'g.	4
M. E. 220—Heat & Pow. Eng'g.	3	M. 104—Kinetics	3
E. E. 110—Elements of E. E.	5	Bact. 141—Bacteriology	3
G. 101—Engineering Society	½	Geol. 2—Geol. Lab.	1
	18½	G. 102—Engineering Society	½
			19½

FOURTH YEAR

C. E. 116—Water Supply Eng'g.	4	C. E. 102—Railway Eng'g.	3
C. E. 120—Materials of Constr.	2	C. E. 118—Sewerage	3
C. E. 123—Bridge Design	3	C. E. 206—Reinforced Concrete	3
C. E. 207—Foundations	3	G. 110—Business Law	3
G. 103—Engineering Society	½	G. 104—Engineering Society	½
C. E. 103—Highway Design	3	Inspection Trip	
Electives—(see below)	2	C. E. 204—Advanced Structs.	3
	17½	Electives—(see below)	2
			17½

ELECTIVES

C. E. 200—Water Power Eng'g.	2	C. E. 209—Highway Lab.	2
Ch. E. 202—Water Ex.	2	C. E. 124—Thesis	2 or 4
C. E. 208—Trans. Econ.	2	C. E. 210—Photogrammetry	2
		Mil. 105-108—Adv. Military	1 to 6

NOTE: Students offering 6 hours of Advanced Military for Engineers toward their degree are not required to take Speech 13.

Electrical Engineering

(POWER OPTION)

The course in electrical engineering has been developed for the purpose of giving to the student who completes the course a general training in engineering fundamentals and special training in either the electrical power field or the communication field. The curriculum in electrical engineering has two options. One is the power option, described below. The other is the communication option, described on a later page.

In the first two years of electrical engineering the work is confined mostly to those subjects which are essential as preparatory courses for the more technical courses which follow in the third and fourth years. This preparatory instruction supplies the requisite foundation in English, mathematics, physics, mechanics, chemistry, economics, drafting, and the elements of shop practice.

The studies pursued during the third year are those of fundamental importance to the electrical engineer. The subject matter includes additional mechanics, Engineering Society, courses in thermodynamics, heat engines, mechanical laboratory, and the following electrical subjects: direct-current machines, direct-current machines laboratory, electrical calculation and design, alternating-current theory, principles of alternating-current machines, electronics, and illumination.

In the fourth year the subject matter consists of additional Engineering Society, courses in kinetics, fluid mechanics, business law and the following electrical subjects: a year's study of alternating-current machines and a course in each of the following: electrical control, electrical communication, electrical engineering laboratory, advanced electrical laboratory, electrical power transmission, and engineering economics. In this year the student has a choice of six hours of electives to be selected from a group of subjects most of which are professional in character. By a proper selection of these electives the student may either broaden his training or else he may continue further specialization in the power field.

It will be observed that for many of the courses scheduled in this curriculum, the work of the classroom is supplemented by concurrent work in the laboratory or drafting room. By means of experimental work in the laboratory, followed with well-written reports and the problems in the design of electrical apparatus, the student acquires a clearer conception of the facts and principles discussed in the classroom and also a working knowledge of the subject matter. All of this is essential if he is to become a successful electrical engineer.

In the course in electrical industry as a public utility, general economic considerations are applied to the problems of electric power generation, the transmission and use of electric power, and the selection of electrical and allied equipment for the economic utilization of electric power. Also the study and analysis of rate structures is taken up. This course and the course in business law are valuable inclusions in the power option for the student who is interested in taking up administrative work.

Curriculum in Electrical Engineering

(POWER OPTION)

Leading to the Degree of Bachelor of Science in Electrical Engineering

FIRST YEAR: See Curriculum on page 200

SUMMER SESSION FOLLOWING FIRST YEAR

	Hrs.		Hrs.
M. E. 11—Machine Shop	2	E. E. 3—Intro. Elect. Eng'g.	2
M. E. 7—Welding & Heat Treatment	1		

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Phys. 105—G. Physics	4	Phys. 106—G. Physics	4
Phys. 107—G. Physics Lab.	1	Phys. 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Military Science	2	Mil. 4—Military Science	2
Econ. 30—Fund. of Econ.	3	E. E. 100—Elem. of Elect. Eng'g.	4
Speech 11—Effective Spk.	3	M. 101—Statics	3
M. E. 27—Mechanism	2		
	19		18

THIRD YEAR

E. E. 104—Illumination	2	E. E. 237—Prin. of A. C. Mach.	4
E. E. 230—D. C. Machinery	3	E. E. 244—Elec. Calc. & Design	3
E. E. 231—D. C. Mach. Lab.	2	E. E. 250—Electronics	4
E. E. 235—A. C. Theory	4	M. 102—Strength of Materials	4
Mathematics 253	3	M. E. 222—Heat Engines	3
M. E. 122—Mechanical Lab.	2	G. 102—Eng'g. Society	½
M. E. 221—Thermodynamics	3		
G. 101—Eng'g. Society	½		
	19½		18½

FOURTH YEAR

E. E. 239—A. C. Machinery	3	E. E. 240—A. C. Machinery	3
E. E. 241—Elect. Eng. Lab.	2	E. E. 242—Adv. Elect. Lab.	2
E. E. 245—Electric Control	2	E. E. 247—Elect. Power Transmission	3
E. E. 260—Elect. Communication	3	E. E. 270—Elect. Ind. as a Pub. Utility	3
C. E. 115—Fluid Mechanics	2	G. 110—Business Law	3
M. 104—Kinetics	3	Electives	3
Electives	3	G. 104—Eng'g. Society	½
G. 103—Eng'g. Society	½		
	18½		17½

ELECTIVES

E. E. 124—Thesis	2 to 5	E. E. 283—Telephone Eng'g.	3
E. E. 253-354—Radio Eng'g.	6	E. E. 286—Industrial Control	3
E. E. 274—Ind. Appl. of Elect. Control	3	Advanced Math.	3
E. E. 280-281—Elect. Probl.	1 to 6	Ch. E. 210—Electr. Chem. Ind.	2 or 3
E. E. 282—Symmetrical Comp.	3	M. E. 223—Steam Pow. Plants	3
		M. E. 228—Eng'g. Lab.	2
		Mil. 105-108—Adv. Military	1 to 6

Electrical Engineering
(COMMUNICATION OPTION)

The course in electrical engineering has been developed for the purpose of giving to the student who completes the course a general training in engineering fundamentals and special training in either the electrical power field or the field of electrical communication. The curriculum in electrical engineering has two options. One is a power option (described on a preceding page) and the other is a communication option (described on this page). In the first two years of electrical engineering the work is confined mostly to those subjects which are essential as preparatory courses for the more technical courses which follow in the third and fourth years. This preparatory instruction supplies the requisite foundation in English, mathematics, physics, mechanics, chemistry, economics, drafting, and the elements of shop practice.

The studies pursued during the third year are those of fundamental importance to the electrical engineer. The subject matter includes additional mechanics, Engineering Society, a course in heat and power engineering, and the following electrical courses: direct-current machines, direct-current machines laboratory, alternating-current theory, principles of alternating-current machines, and electronics, with the following subject matter of special importance in communication work: Two courses of advanced mathematics intended to provide proficiency in mathematical analysis as an aid in the study of advanced courses in communication. A laboratory course in electrical measurements to develop the technique of precise measurements in communication work.

In the fourth year the subject matter consists of additional Engineering Society, courses in fluid mechanics, business law, illumination, engineering economics, and communication subjects consisting of two semesters of electrical communication, and two semesters of radio engineering with the accompanying laboratory. In this year the student has a choice of six hours of electives to be selected from a group of subjects most of which are professional in character. By a proper choice of these electives the student may either broaden his training, or else he may continue further specialization in the communication field.

It will be observed that for many of the courses scheduled in this curriculum, the work of the classroom is supplemented by concurrent work in the laboratory or drafting room. By means of experimental work in the laboratory followed with well-written reports and the problems in the design of electrical apparatus, the student acquires a clearer conception of the facts and principles discussed in the classroom and also a working knowledge of the subject matter. All of this is essential if the student is to become a successful electrical engineer.

In the course in electrical industry as a public utility, general economic considerations are applied to electric power, its generation, transmission, and use together with the selection of electrical and allied equipment from an economic standpoint; also a study and analysis is made of rate structures. This course and the course in business law are valuable inclusions in the electrical engineering curriculum for the student who is interested in taking up administrative work.

Curriculum in Electrical Engineering

(Communication Option)

Leading to the Degree of Bachelor of Science in Electrical Engineering

FIRST YEAR: See Curriculum on page 200

SUMMER SESSION FOLLOWING FIRST YEAR

	Hrs.		Hrs.
M. E. 11—Machine Shop	2	E. E. 3—Intro. Elect. Eng'g.	2
M. E. 7—Welding and Heat Treat.	1		

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Phys. 105—G. Physics	4	Phys. 106—G. Physics	4
Phys. 107—G. Physics Lab.	1	Phys. 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Military Science	2	Mil. 4—Military Science	2
Econ. 30—Fund. of Economics	3	E. E. 100—Elem. of Elect. Eng'g.	4
Speech 11—Effective Spk.	3	M. 101—Statics	3
M. E. 27—Mechanism	2		
	19		18

THIRD YEAR

E. E. 230—D. C. Machinery	3	E. E. 237—Prin. of A. C. Mach.	4
E. E. 231—D. C. Mach. Lab.	2	E. E. 244—Elect. Calc. & Design	3
E. E. 235—A. C. Theory	4	E. E. 250—Electronics	4
Mathematics 253	3	E. E. 251—Elect. Measurements Lab.	1
M. 102—Strength of Materials	4	Mathematics 254	3
M. E. 220—Heat & Power Eng'g.	3	M. 104—Kinetics	3
G. 101—Eng'g. Society	½	G. 102—Eng'g. Society	½
	19½		18½

FOURTH YEAR

E. E. 104—Illumination	2	E. E. 254—Radio Eng'g.	3
E. E. 245—Electric Control	2	E. E. 256—Radio Lab.	2
E. E. 253—Radio Eng'g.	3	E. E. 261—Elect. Communication	3
E. E. 255—Radio Lab.	3	E. E. 270—Elect. Ind. as Pub. Utility	3
E. E. 260—Elect. Communication	3	G. 110—Business Law	3
C. E. 115—Fluid Mechanics	2	Electives	3
Electives	3	G. 104—Eng'g. Society	½
G. 103—Eng'g. Society	½		
	18½		17½

ELECTIVES

E. E. 124—Thesis	2 to 5	E. E. 282—Symmetrical Comp.	3
E. E. 247—Elect. Power Transmission	3	E. E. 283—Telephone Eng'g.	3
E. E. 274—Ind. Appl. of Elect. Cont.	3	E. E. 296—Industrial Control	3
E. E. 290, 291—Elect. Prob.	1 to 5	Adv. Math. or Physics	3 to 6
		Mil. 105-106—Adv. Mil.	1 to 6

Mechanical Engineering

The purpose of the course in mechanical engineering is to give the student such mental equipment as will enable him to deal most effectively both technically and commercially with general engineering problems. All possible practice is given in the work that an engineer is ordinarily called on to do, but greater stress is laid on a thorough knowledge of those underlying fundamental principles and methods which are the foundation of all engineering professions. To this is added a study of those economic subjects which are essential to a thorough understanding of sound business methods.

The first and second years are devoted to those basic preparatory courses which are essential to the more technical courses which follow in the third and fourth years. This preparatory instruction supplies the requisite foundation in English, mathematics, chemistry, physics, statics, mechanism, drafting, and shop practice.

Fundamental drafting-room procedure is taught in the first year and this is supplemented by shop work, beginning in the summer following the first year. This is planned to give a knowledge of the fundamental tools and of methods of production, which, when combined with the study of mechanism, machine design, and power-plant design in the second, third, and fourth years, will enable the student to work out designs that are both practical in operation and economical to manufacture.

The work in pure mathematics is terminated at the end of the second year, and applications follow in the recitation room courses in mechanism, statics, mechanics of materials, dynamics, and machine design. Power engineering begins with the course in thermodynamics in the third year and is continued by the courses in heat engines, internal combustion engines, and power plant design A sufficient amount of electrical engineering is given in the third and fourth years to enable the student to handle engineering operations involving the simple electrical problems, and additional courses are available as electives.

The engineering laboratories provide the student with practice in testing, handling, and caring for a large variety of machinery, including steam, air, gas, hydraulic, material-testing, internal combustion, and power-transmission machinery. One-half day a week is devoted to this work during the last two years.

Electives are provided in the fourth year which enable the student to specialize in the power field or in the industrial field in accordance with his natural inclination. Students interested in the power field pursue courses in steam turbines, heating, ventilating, and air conditioning. Students interested in the industrial field pursue courses in problems of organization and management of industries, motion and time study, and related subjects.

The curriculum is broad, highly technical, and designed to meet the needs of young men interested in the scientific aspects of industry. The young graduate ordinarily enters a graduate apprenticeship in a public utility, manufacturing, or operating organization where opportunity is provided for his development in research, design, operation, sales, or administration, depending upon his interests and aptitudes and upon the opportunities available.

Curriculum in Mechanical Engineering

Leading to the Degree of Bachelor of Science in Mechanical Engineering

FIRST YEAR: See Curriculum on page 199.

SUMMER SESSION FOLLOWING FIRST YEAR

	Hrs.
M. E. 15—Welding, Forming, and Heat Treatment	2
M. E. 11—Machine Work	2
M. E. 12—Machine Work	1
	5

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Physics. 105—G. Physics	4	Physics. 106—G. Physics	4
Physics 107—G. Physics Lab.	1	Physics 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Military Science	2	Mil. 4—Military Science	2
Chem. 10—Quant. Analysis	2	M. 101—Statics	3
M. E. 29—Mechanism	4	M. E. 25—Elem. of Mach. Desn.	2
M. E. 16—Prod. Control	2	Speech 13—Eff. Spk.	2
	19		18

THIRD YEAR

Econ. 103—Econ. and Acct.	3	Bus. 110—Acct. for Engs.	2
M. 102—Mech. of Materials	4	M. 104—Kinetics	3
M. 103—Materials Test Lab.	1	E. E. 103—Elements of E. E.	4
E. E. 102—Elements of E. E.	4	M. E. 113—Machine Design	4
M. E. 122—Mechanical Lab.	2	M. E. 105—Machine Constr.	2
M. E. 221—Thermodynamics	3	M. E. 222—Heat Engines	3
G. 101—Engineering Society	½	G. 102—Engineering Soceity	½
	17½		18½

FOURTH YEAR

C. E. 115—Fluid Mechanics	3	G. 110—Business Law	3
C. E. 122—Structural Eng'g. or		E. E. 274—Ind. App. of Elec. Cont.	3
Ch. E. 220—Metallurgy	2	M. E. 227—Pow. Plant Design	2
Ch. E. 221—Metallurgy Lab.	1	M. E. 228—Eng'g. Lab.	2
M. E. 123—Eng'g. Lab.	2	M. E. 229—Int. Comb. Engines	3
M. E. 203—Machine Design	4	G. 104—Engineering Society	½
M. E. 223—Steam Pow. Plants	3	Inspection Trip	
G. 103—Engineering Society	½	Electives—(see below)	6
Electives—(see below)	3		19½
	18½		

ELECTIVES

M. E. 106—Shop Methods	2 or 3	M. E. 270—Industrial Lub.	3
M. E. 124—Thesis	2 to 4	Mil. 105-108—Adv. Military for Engineers	1 to 6
M. E. 205—Industrial Eng'g.	3	E. E. 244—Elect. Cal. & Desn.	3
M. E. 224—Steam Turbines	3	Ch. E. 211—Fuels and Combustion	2 to 3
M. E. 250—Heat. Vent. & Air Cond.	3		

FIVE-YEAR CURRICULA

For a description of curricula leading to the degree of Bachelor of Science and degrees in engineering, see page 200.

THE SCHOOL OF MINES CURRICULA[1]

1. A four-year curriculum leading to the degree of Bachelor of Science in Engineering of Mines, with options in coal mining and in petroleum and natural gas engineering.

2. Combined science and engineering curricula extending over five or more years leading to the degrees of Bachelor of Science and Bachelor of Science in Mining Engineering in the School of Mines.

Mining Engineer

Mining engineering deals with the processes and appliances used in the extraction of minerals from within the earth and their utilization. Not only must the mining engineer be thoroughly trained in mining and geology, but also in the application of the fundamental principles of civil, electrical, and mechanical engineering to mining conditions.

The first two years of the course in mining engineering are devoted to a thorough training in the underlying principles of mathematics, geology, physics, and chemistry. Supplementing these are courses in surveying, including mine surveying, English, and drawing. For the last two years of the course two options are provided, one in coal mining and one in geology, oil, and gas engineering. The student is permitted to state his choice of option at the beginning of the third year. Summer employment is usually arranged for students desiring such work, and such summer work is encouraged.

Coal Mining

In the Coal Mining Option the study of coal mining is taken up in the third year. This study includes the geology and classification of coals; explosives and blasting; prospecting; shaft sinking and tunneling; methods of working; haulage, hoisting, and pumping; and the preparation of coal for the market. A course in the projection of mine workings and the design of mining plants is offered throughout the fourth year. A course in the utilization of mining machinery, with particular reference to electrical equipment, is required in the senior year. A thorough course in mine gases and the ventilation of mines is given in the first half of the fourth year, supplemented by work in the mining laboratory. The course in fuels is designed to give the student a knowledge of the various fuels that are utilized in engineering practice, while the courses in metallurgy acquaint him with the minerals and processes used in manufacture of iron and steel. The course in mine management presents the economic, social, governmental, labor, and financial consideration to be met in the successful management of a mining enterprise.

The study of steam engineering begins with the course in heat and power engineering. Thorough groundwork in engineering principles is acquired in the five mechanical courses.

[1]The freshman year of these curricula is common with the freshman year in the College of Engineering. This provision permits a student to postpone a choice of curricula until after a year of college work.

Practice in the handling and care of instruments and machinery and in the solution of practical engineering problems is offered in the mechanical laboratory. These courses are followed by courses in electrical engineering and structural engineering.

Training in the science of geology is offered by the course in mineralogy and general geology. These courses may be supplemented by the study of the economic geology of the non-metallic minerals in the fourth year, special attention being paid to the geology of coal, oil, and gas. Should the student desire further work in geology a course in fluid geology is offered as an elective subject.

The courses in economics and business law furnish the fundamental business training so essential for the engineer.

Local coal fields and mining operations are utilized extensively for instruction and field work.

Curriculum in Mining Engineering

(COAL-MINING OPTION)

Leading to the Degree of Bachelor of Science in Engineering of Mines

FIRST YEAR: See Curriculum on page 200

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Physics 105—G. Physics	4	Physics 106—G. Physics	4
Physics 107—G. Physics Lab.	1	Physics 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Military Science	2	Mil. 4—Military Science	2
E. M. 100—Mine Surveying	2	Chem. 6—Quant. Analysis	3
E. M. 106—Mineralogy	2	E. M. 101—Mines Surveying	2
Geol. 1—General Geology	3	M. 101—Statics	3
Geol. 2—General Geology Lab.	1		
	19		19

E. M. 102s—Summer Mine Surveying (five weeks) 5

THIRD YEAR

E. E. 102—Elements of E. E.	4	E. E. 103—Elements of E. E.	4
C. E. 110—Structural Drafting	2	E. M. 202—Coal Lab.	1
M. 102—Mech. of Materials	4	Speech 13—Effective Spkg.	2
M. 103—Materials Test. Lab.	1	E. M. 212—Coal Mining	4
E. M. 111—Mining	2	C. E. 115—Fluid Mechanics	3
E. M. 107—Mining Methods	4	M. E. 220—Heat & Pow. Eng'g.	3
Ch. E. 220—Metallurgy	2		
G. 101—Engineering Society	½	G. 102—Engineering Society	½
	19½		17½

FOURTH YEAR

Econ. 103—Econ. and Acct.	3	G. 110—Business Law	3
C. E. 122—Structural Eng'g.	3	Bus. 110—Prin. of Acct.	2
E. M. 115—Mine Design	2	E. M. 114—Mine Management	2
E. M. 213—Mine Ventilation	3	E. M. 116—Mine Design	3
M. 104—Kinetics	3	E. M. 118—Coal Preparation	3
G. 103—Engineering Society	½	E. M. 119—Mine Equip. & Mach.	2
Electives—(see below)	3	G. 104—Engineering Society	½
Inspection Trip		Electives—(see below)	3
	17½		18½

ELECTIVES IN THE COAL-MINING OPTION

E. M. 117—Indus. Safety Eng'g. .. 3
E. M. 120—Thesis .....2 to 4
E. M. 203—Geol. Survey 3
Ch. E. 211—Fuels 3
Ch. E. 222—Non. Fer. Met. 2
E. E. 274—Industrial Applications of Electricity 3
C. E. 206—Concrete Const. 3
M. E. 207—Industrial Eng'g. 3
Geol. 111—Economic Geol. ...3 or 4
Geol. 3—Historical Geol. 3
Geol. 4—Hist. Geol. Lab. 1
Geol. 108—Nat. Resources and Geology of West Va. ....2 or 3
Mil. 105-108—Adv. Military ...1 to 6

Geological, Petroleum and Natural Gas Engineering

This option is planned to meet the needs of the engineer who is more interested in the geological aspect of mining than in the actual operation of a mining property and particularly for the student interested in the fields of natural gas and petroleum engineering. There is a growing demand for the so-called mining geologist who, while he has had a thorough training in the fundamentals of engineering in general and of mining engineering in particular, yet is specially qualified to work out the detailed geological features of mining properties and to make reports on them. This is particularly true in the case of oil and gas companies, where accurate knowledge in advance of actual drilling operations is of the greatest importance in the economical development of the field. Besides the opportunities offered by mining companies, many of our railroads maintain a corps of geologists while the several states and the federal government are continually carrying on geological investigations. This course also offers an excellent preparation for those who propose to do graduate work.

Particular emphasis is placed on the development, production, distribution, and utilization of natural gas and petroleum. This is an engineering field essential to modern industry offering many opportunities for the technically trained student. Local production fields, compressor stations, and refineries coupled with new equipment facilities offer many unique advantages in this field of engineering.

In the third year the course differs from the coal-mining option in that organic chemistry, petroleum, natural gas, and geological courses are substituted for the courses in coal mining. A course in field geology in which the student prepares a geological map and a complete report on an assigned area enables him to apply the geological knowledge received in various courses. The fundamentals of mining and metallurgy are studied in the third year as well. The study of oil and gas geology treats of the origin, properties, distribution, and mode of accumulation of oil and gas, and familiarizes the student with all the available sources of information on this subject. The courses in oil and gas production and oil refining deal with the subjects of the chemical and physical properties of petroleum and natural gas, their extraction and subsequent treatment, the valuation of oil and gas properties, reports on them, and the actual testing in the laboratory of various oils, oil shales, and natural gas. The problems of natural gas measurement and distribution are particularly stressed.

A thorough grounding in the fundamentals of business is afforded by the courses in economics, accounting, and business law.

Curriculum in Mining Engineering

(PETROLEUM AND NATURAL GAS OPTION)

Leading to the Degree of Bachelor of Science in Engineering of Mines

FIRST YEAR: See Curriculum on page 200

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Physics 105—G. Physics	4	Physics 106—G. Physics	4
Physics 107—G. Physics Lab.	1	Physics 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Military Science	2	Mil. 4—Military Science	2
E. M. 100—Mine Surveying	2	Chem. 6—Quant. Analysis	3
E. M. 106—Mineralogy	2	E. M. 101—Mine Surveying	2
Geol. 1—General Geol.	3	M. 101—Statics	3
Geol. 2—Gen. Geol. Lab.	1		
	19		19

E. M. 102s—Summer Mine Surveying (five weeks) 5

THIRD YEAR

Chem. 233—Organic Chem.	5	M. E. 220—Heat & Pow. Eng'g.	3
Geol. 3—Historical Geol.	3	M. 104—Kinetics	3
Geol. 4—Hist. Geol. Lab.	1	Speech 13—Effective Speaking	2
M. 102—Mech. of Materials	4	Geol. 161—Field Geol.	3
M. 103—Materials Test. Lab.	1	Ch. E. 101—Oil Lab.	1
Ch. E. 220—Metallurgy	2	C. E. 115—Fluid Mechanics	3
E. M. 201—Oil Field Development	2	G. 110—Business Law	3
G. 101—Engineering Society	½	G. 102—Engineering Society	½
	18½		18½

FOURTH YEAR

Econ. 103—Econ. and Accounting	3	Bus. 110—Prin. of Accounting	2
Ch. E. 211—Fuels	3	Geol. 211—Econ. Geol. of Coal, Oil, and Gas	3
Ch. E. 212—Oil Refining	2	E. M. 203—Geol. Surveying	2
Geol. 205—Structural Geol.	3	E. M. 204—Oil & Gas Prod.	4
E. E. 110—Elements of E. E.	5	E. M. 205—Gas Meas. Eng'g.	2
G. 103—Engineering Society	½	G. 104—Engineering Society	½
Electives—(see below)	2	Inspection Trip	
		Electives—(see below)	4
	18½		17½

ELECTIVES IN THE PETROLEUM AND NATURAL GAS OPTION

E. M. 117—Indus. Safety Eng'g.	3	C. E. 206—Concrete Constr.	3
E. M. 212—Coal Mining	4	M. E. 207—Industrial Eng'g.	3
E. M. 120—Thesis	2 to 4	Geol. 111—Economic Geology (Non-metallic)	3
Geol. 108—Natural Resources & Geology of West Virginia	2 or 3	Chem. 238, 260	3 to 5
Mil. 105-108—Adv. Military	1 to 6	M. E. 229—Int. Comb. Engines	2

FIVE-YEAR CURRICULA

Leading to the Degree of Bachelor of Science in conjunction with Degrees in Engineering and in Mining Engineering

These curricula are designed to meet the needs of students who wish a broader training in liberal-arts subjects than is provided in a four-year curriculum.

(A) Requirements for the degree of Bachelor of Science

Subject	Hours
The requirements in the first three years of any four-year engineering curriculum[1]	116[2] to 119[2]
Additional economics (group requirements of 6 hours)	1 to 3
One foreign language	12
Elective from one of the following groups: (1) English, journalism, speech; (2) foreign language; (3) history; (4) political science; (5) philosophy and sociology; (6) business administration.	6
Total	136[2] to 140[2]

(B) Requirements for the Bachelor of Science degree in Engineering or Engineering of Mines to be conferred upon completion of the fifth year:

The work outlined for the fourth year in the department in which the first degree was taken	37 to 33
Total for five years	173[2] to 175[2]

THE TWO-YEAR CURRICULUM

Leading to the Certificate as Electronic and Radio Technician

Students who may wish to acquire technical training in the field of radio, electronics, and communication, but who do not care to meet all the requirements for the degree of Bachelor of Science in Electrical Engineering, may register for the two-year curriculum for the certificate as Electronics and Radio Technician.

This curriculum has been developed to give the student fundamental training in the application of electricity and allied subjects to prepare him for installation, operation, maintenance, and repair of radio and electronic equipment.

The requirements for entrance are the same as for the regular four-year courses. A total of 76 hours' credit plus the regular University requirements in military and physical education are required for completion of this course.

FIRST YEAR

First Semester	Hrs.	Second Semester	Hrs.
Eng. 1—Comp. & Rhet.	3	Eng. 2—Comp. & Rhet.	3
Math. 3—College Algebra	3	Phys. 2—General Physics	3
Math. 4—Plane Trigonometry	3	Phys. 4—General Phys. Lab.	1
Phys. 1—General Physics	3	Phys. 114—Intro. Radio-Tele. and Radio-Telephony	3
Phys. 3—General Phys. Lab.	1	M. E. 7—Heat Treat. & Welding	1
Phys. 113—Introductory Radio	3	E. E. 50—Prin. Elect. Tubes & Cir.	3
		M. E. 11—Machine Shop	2
	16		16

SUMMER SESSION FOLLOWING FIRST YEAR

Econ. 1s and 2s—Principles of Econ.	4
E. E. 51—Radio Receivers	4
E. E. 52—Princ. and Practice of Communications	4
	12

SECOND YEAR

M. E. 20—Mechanical Draw.	3	Chem. 2—Inorganic Chem.	4
Bus. 5—Accounting	3	Bus. 127—Salesmanship	2
Chem. 1—Inorganic Chem.	4	E. E. 110—Elem. of E. E.	5
E. E. 53—Prop. & Antenna Sys.	3	E. E. 55—Operation & Maint. of Radio Trans.	5
E. E. 54—Radio Servicing	3		
	16		16

GRADUATE CURRICULA

Graduate work leading to the degree of Master of Science in Engineering is offered in all departments. In certain departments courses leading to the degree of Doctor of Philosophy are also offered. The student who plans to pursue graduate work is directed to the courses as outlined in the Graduate School section of the University catalogue.

SPECIAL ENGINEERING CURRICULA

1. Elective Groups for Students in Other Colleges. Candidates for degrees other than engineering degrees and special students in any department of the University are permitted to elect subjects in the College of Engineering and the School of Mines, provided, in each case, they have had the subjects specified as prerequisites. Students who wish to take a general classical or scientific course of study before taking the engineering curriculum are advised to carry their mathematics as far as called for by the engineering curriculum, and to take some of their elective work in the College of Engineering.

Credits are given in the College of Arts and Sciences for the following engineering courses: Ch. E. 101, 202, 205, 206, 210, 220, and 221; C. E. 1, 2, 3, 110, and 115; E. E. 100, 101, 102, 103, 200, 201, 202, 203, 205, and 206; E. M. 103, 201, 202, 203, and 204; M. 101, 102, 103, 104; M. E. 20, 25, 26, 29, 221, and 222.

In addition the student may elect with the consent of his adviser, when his major subject is physics or if he is enrolled in the College of Education: M. E. 10 to 16 and 105 to 107; Ch. E. 112s.

2. Partial Curriculum. Students who have not the time or are otherwise unable to take full curriculum will be allowed to take a special or partial curriculum, consisting of such studies as they are prepared to take, provided such curriculum shall have been approved by the adviser. For further information see statement of requirements for admission as special students.

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[1]Students maintaining an honor-point average of 1.5 or over may be granted separately the Bachelor of Science degree; otherwise the conferring of this degree will be deferred until the student has satisfied the requirements of the engineering degree.

[2]These figures include the present University requirements for 8 hours in military science and 2 hours in physical education.

COURSES IN THE COLLEGE OF ENGINEERING

NOTE: Courses marked by an asterisk (*) may be taken as undergraduate work in colleges other than the College of Engineering.

Aeronautical Engineering and Aviation

Assistant Professor WOOLARD and Flight Instructor HENRY

A.E. 15. Aircraft Repair and Maintenance. I, II. S. 2 Hrs. PR: Enrollment in Aeronautical Engineering. Splicing of wind spars, ribs, stringers, care and replacement of airplane fabrics and finishes. Repair and maintenance of engines, carburetors, magnetos, propellers, and aircraft accessories. Mr. Henry

A.E. 16. Elementary Aerodynamics. II. 3 Hrs. PR: Math. 108 (or registration in Math. 108) and Physics 105 and 107. Fundamentals of aerodynamics as applied to the airplane and propeller. Staff

***A.E. 101. Flight Training** I, II, S. 1 Hr. PR: A.E. 120 or registration in A.E. 120. Beginning flight instruction and training consisting of 20 hours of flight time. The student will have approximately 12 hours of dual and 8 hours of solo flying in this course. Special flight fee $100, payable at registration. Mr. Henry

A.E. 102. Flight Training. I, II, S. 1 Hr. PR: A.E. 101. Continuation of A.E. 101, consisting of 20 hours' flight time. This course, together with A.E. 101, will enable a student to obtain the required flight time and necessary experience to prepare him for a C.A.A. private pilot's examination. Special flight fee of $100, payable at registration. Mr. Henry

A.E. 124. Thesis. 2 to 5 hours. Staff

A.E. 202. Aerodynamics. II. 3 Hrs. PR: Math. 253, A.E. 16 and registration in C.E. 115. Continuation of A.E. 16, but more advanced. Mr. Woolard

A.E. 203. Chordwise and Spanwise Air-load Distribution. II. 3 Hrs. PR: A.E. 202. Calculation of air loads on wings and tail surfaces. Mr. Woolard

A.E. 204. Airplane Performance. I. 2 Hrs. PR: A.E. 222, A.E. 202. Detailed study of airplane performance. Mr._____

A.E. 205. Experimental Aerodynamics. I. 2 Hrs. PR: A.E. 202. Study of experimental methods and equipment. Laboratory calibration of equipment and wind-tunnel tests. Lecture and laboratory. Mr. Woolard

A.E. 210. Basic Airplane Structures. I, II. 3 Hrs. PR: M. 102 and M. 103. Analysis of the truss-type airplane structure and components. Brief introduction to stressed skin structures. Mr._____

A.E. 211. Structural Design of Metal Airplanes. I, II. 4 Hrs. PR: A.E. 210 or C.E. 122. Structural analysis of metal airplanes of the monocoque and semi-monocoque type. Mr._____

A.E. 212. Airplane Design. II. 3 Hrs. PR: A.E. 202 and A.E. 211. Preliminary aerodynamic and structural design of an airplane. Study of the C.A.A. Airplane Airworthiness Requirements. Staff

A.E. 213. Airplane Structures Laboratory. II. 1 Hr. PR: A.E. 211. Mr._____

A.E. 221. **Aircraft Power Plants.** I. 3 Hrs. PR: M.E. 221. Construction and operating characteristics of aircraft engines, jet and rocket propulsion, and aircraft fuels. Mr. _____

A.E. 222. **Aircraft Propulsion.** II. 2 Hrs. PR: A.E. 16 and M. 102. Fixed-pitch and constant-speed propellers; jet and rocket propulsion. Mr. Woolard

A.E. 223. **Aircraft Power-plant Design.** II. 3 Hrs. PR: A.E. 221. Layout of a complete engine; detailed design of component parts. Mr. _____.

A.E. 225. **Aircraft-engine Laboratory.** II. 2 Hrs. PR: A.E. 221 Mr._____

A.E. 241. **Air Navigation.** I, II. 2 Hrs. PR: A.E. 120. Dead reckoning; celestial and radio navigation. Mr. _____

Supplemental Aviation Courses

*A.E. 120. **Aviation Ground School.** I, II, S. 2 Hrs. Nomenclature of aircraft, civil air regulations, navigation, meteorology, and aircraft engines. Staff

*A.E. 121. **Advanced Flight Training.** I, II, S. 1 Hr's. credit for 20 hours of flight time. PR: A.E. 102. Advanced flight training in light airplanes. Special flight fee for 20 Hrs'. flight_____$100
($100 payable at registration.)

*A.E. 122. **Advanced Aviation Ground School.** I, II. 5 Hrs. Preparation for written examination for commercial pilot's certificate. Mr. Woolard

*A.E. 123. **Advanced Flight Training.** I, II, S. 1 Hr. Credit for each 20 hours of flight time. PR: A.E. 102. Similar to A.E. 121 except that the flight training is given in a heavier type of airplane.
Special flight fee for 20 hrs'. flight $180
($90 payable at registration and the balance payable after completion of 10 hours' flight time.) Mr. Henry

Chemical, Metallurgical, and Ceramic Engineering

Professor KOEHLER; Associate Professor SIMONS; Assistant Professors FAIRBANKS and HOLDEN; Instructors BARTKUS and JONES

UNDERGRADUATE DIVISION

*101. **Oil Laboratory.** II. 1 Hr. Primarily for students taking the Petroleum and Natural Gas Option. PR: Chemistry 6 or 107. Mr. Koehler

102. **Blow-pipe Analysis and Assaying.** II. 2 Hrs. Laboratory and recitations. PR: Chemistry 6 or 107. Mr. Bartkus

105. **Chemical Engineering Design.** II. 2 Hrs. PR: M.E. 20; PR or concurrent, M. 102 and Ch. E. 205. Mr. Simons

109. **Chemical Engineering Economics.** I. 2 Hrs. The economic principles applied to layout, location, design, and operation of plants devoted to the production of industrial chemicals. PR: Econ. 30 and Chemistry 15. Mr. Koehler

*110s. **Practical Pottery.** S1, S2. 2 Hrs. Fundamentals of clay working. Mr. Koehler and Mr. Jones

124. **Thesis.** I, II. 2 to 5 Hrs. Some problem in chemical engineering or industrial chemistry is selected for investigation. A carefully prepared report is required. Open only to qualified seniors. Staff

201. **Unit Organic Processes.** II. 3 Hrs. Unit processes involved in the manufacture of commercial products from organic raw materials, petroleum, benzene and related compounds; intermediates, dyes, drugs, and explosives. PR: Chemistry 233 and Ch. E. 205. Mr. Simons

*202. **Water Examination and Purification.** II. 2 Hrs. PR: Chemistry 10 or 107. Staff

203. **Chemical Engineering Thermodynamics.** II. 2 Hrs. PR: Ch. E. 204 and 208. Mr. Koehler and Mr. Holden

204. **Chemical Engineering Calculations.** I. 2 Hrs. Industrial stoichiometry; calculations involved in the unit operations and processes of the chemical engineering industries. PR: Chemistry 261 and M. E. 220. Mr. Koehler and Mr. Holden

*205. **Elements of Chemical Engineering.** I. 3 Hrs. PR or concurrent: Chemistry 260. Mr. Koehler and Mr. Holden

*206. **Engineering Chemistry Laboratory.** I. 1 Hr. Technological tests and analyses of boiler waters, cements and paints. PR: Chemistry 107. Mr. Holden

207. **Principles of Chemical Engineering.** I. 2 Hrs. Continuation of Ch. E. 205; also PR or concurrent: Ch. E. 204. Mr. Simons

208. **Chemical Engineering Laboratory.** I, II. 2 Hrs. Unit operations of the chemical engineering industries. PR: Ch. E. 205; PR or concurrent: C. E. 115. Mr. Simons and Mr. Holden

209. **Chemical Engineering Laboratory.** I, II. 2 Hrs. Continuation of Ch. E. 208, involving study of the more difficult unit operations. Mr. Simons and Mr. Holden

*210. **Electrochemical Industries.** I, II. 2 or 3 Hrs. PR: Chemistry 4, and PR or concurrent: E. E. 110 or Chemistry 260. Mr. Koehler

211. **Fuels and Combustion.** I. 2 or 3 Hrs. PR: Chemistry 6, 10, or 107 and M. E. 122 or M. E. 220. Mr. Koehler

212. **Oil-refining Laboratory.** I. 2 Hrs. PR: Chemistry 233 and Ch. E. 101. Mr. Simons

213. **Principles of Gas and Fuel Engineering.** II. 2 or 3 Hrs. PR: Ch. E. 211. Mr. Koehler

214. **Inorganic Chemical Technology.** I. 2 Hrs. PR: Ch. E. 205 and M. E. 220. Mr. Koehler

215. **Organic Chemical Technology.** II. 2 Hrs. PR: Ch. E. 201 and Ch. E. 205. Mr. Simons

216. **Chemical Engineering Design.** II. 2 Hrs. PR: Ch. E. 105 and Ch. E. 208. Mr. Simons

219. **Principles of Chemical Engineering.** II. 2 Hrs. Continuation of Ch. E. 207. Mr. Simons

*220. **Metallurgy of Iron and Steel.** I. 2 Hrs. PR: Chem. 6, 10 or 107. Mr. Bartkus

*221. **Metallurgy Laboratory.** I. 1 Hr. Preparation and microscopical examination of specimens of iron and steel; analytical determinations; photomicrographs; to accompany Ch. E. 220. Mr. Bartkus

222. **Metallurgy, Non-ferrous.** II. 2 Hrs. PR: Chemistry 6, 10 or 15. Mr. Bartkus

223. **Metallography.** II. 2 or 3 Hrs. Phase-rule diagrams of alloy systems. Photomicrographs of metals and alloys. PR: Ch. E. 220, 221, 222, and Chemistry 260. Mr. Bartkus

227. **Aircraft Structural Materials.** I. 2 Hrs. PR: A. E. 211. Heavy and light alloys, plastics, fabrics, woods, and other major materials used in the production of aircraft. Mr. Bartkus

230. **Ceramics.** II. 2 or 3 Hrs. A review of the ceramic industries. Chemical and engineering principles applied in the manufacture of ceramic materials. PR: Chemistry 6 or 107. Mr. Koehler and Mr. Jones

231. **Advanced Ceramics Laboratory.** I. 2 Hrs. Preparation of bodies, glazes, enamels, and glass. Biscuit and glost firing. Coloring agents. Factory control tests. PR: Ch. E. 230. Mr. Koehler and Mr. Jones

232. **Refractories.** I, II. 2 Hrs. Manufacture, properties, and use of refractory materials. Standard tests. Study of phase diagrams of refractory materials. PR: Chemistry 6 or 107 and Chemistry 260. Mr. Koehler

233. **Glass.** I, II. 2 Hrs. Physical and chemical properties of glass. Methods of analysis of glass and of raw materials. Theory and practice of manufacture. PR or concurrent: Chemistry 260. Mr. Koehler

235s. **Practical Pottery.** S1. 2 Hrs. A continuation of 110s. Mr. Koehler and Mr. Jones

*236s. **Pottery and Ceramic Art.** S2. 2 Hrs. Mr. Koehler and Mr. Jones

GRADUATE DIVISION

300. **Seminar.** S1. I, II. 1 to 6 Hrs. Hours to be arranged. Staff

304, 305, 306, 307. **Advanced Unit Operations.** I, II, S. 2 to 5 Hrs. per semester. Mr. Koehler and Mr. Simons

323, 324. **Advanced Unit Processes.** I, II, S. 2 to 5 Hrs. per semester. Mr. Simons

353. **Transformation in Silicates.** I, II. 2 Hrs. PR: Ch. E. 230 Mr. Koehler

354. **Advanced Fuel Engineering.** I. 3 Hrs. PR: Ch. E. 213. Mr. Koehler

372. **Advanced Chemical Engineering Design.** I, II, S. 2 to 5 Hrs. Mr. Simons

397, 398. **Research.** I, II. Credit to be arranged. A suitable problem in chemical engineering, metallurgy, or ceramics is selected for investigation. PR: Ch. E. 207 and 208. Mr. Koehler and Staff

Civil Engineering

Professors DAVIS, DOWNS, and SPEIDEN; Associate Professor BAKER; Instructors BURCHINAL, SIMMONS, and STEPHENS

UNDERGRADUATE DIVISION

*1. **Surveying.** I, II. 2 Hrs. Elementary surveying and spherical trigonometry. Primarily for freshmen. PR: Math. 4. Mr. Baker and Mr. Burchinal

*2. **Surveying.** I. 4 Hrs. PR: C. E. 1 and Math. 4. Mr. Baker

*3. **Railroad Curves.** II. 2 Hrs. Continuation of C. E. 2. Mr. Baker

4s. **Summer Surveying.** S1 (5 weeks). 5 Hrs. PR: C. E. 3. Mr. Baker

*5. **Land Surveying.** I. 4 Hrs. Primarily for forestry students. PR: Math. 10. Mr. Baker

*6. **Topographic Mapping.** II. 2 Hrs. Primarily for forestry students. PR: C. E. 5. Mr. Baker

101. **Elements of Highway Engineering.** I, II. 3 Hrs. PR: C. E. 4s. Mr. Downs

102. **Railway Engineering.** II. 3 Hrs. PR: C. E. 4s. Mr. Downs

103. **Highway Design.** I. 3 Hrs. PR: C. E. 101. Mr. Downs

*110. **Structural Drafting.** I. 2 Hrs. PR: M. E. 20 and registration in M. 101. Mr. Speiden

*115. **Fluid Mechanics.** I, II. 2 or 3 Hrs. PR: M. 102 or 104 (or registration in M. 102 or 104). Mr. Speiden

116. **Water Supply Engineering.** I. 4 Hrs. PR: C. E. 115. Mr. Speiden

117. **Municipal Engineering.** I. 2 Hrs. PR: C. E. 115. Mr. Speiden

118. **Sewerage.** II. 3 Hrs. PR: C. E. 115. Mr. Speiden

120. **Materials of Construction.** I. 2 Hrs. PR: M. 102. Mr. Downs

121. **Structural Engineering.** II. 4 Hrs. PR: M. 102. Mr. Davis

122. **Structural Engineering.** I. 2 or 3 Hrs. PR: M. 102. Mr. Davis

123. **Bridge Design.** I. 3 Hrs. PR: C. E. 121. Mr. Davis

124. **Thesis.** I, II. 2 or 4 Hrs. Special design, investigation, or original research of some assigned topic relating to civil engineering . Staff

180. **Civil Problems.** I, II. S. 1 to 4 Hrs. Staff

200. **Water-Power Engineering.** II. 2 Hrs. PR: C. E. 115. Mr. Speiden

201. **Hydraulic Measurements.** I, II. 1 Hr. PR: C. E. 115. Mr. Speiden

202. **Water Purification.** I. 3 or 4 Hrs PR: registration in C. E. 116. Mr. Speiden

203. **Sewage Disposal.** II. 3 Hrs. PR: C. E. 115. Mr. Speiden

204. **Advanced Structures.** II. 3 Hrs. PR: C. E. 121. Mr. Davis

206. **Reinforced Concrete.** II. 3 Hrs. PR: C. E. 121. Mr. Davis

207. **Foundations.** I. 3 Hrs. PR: C. E. 121. Mr. Davis

208. **Transportation Economics.** I or II. 2 Hrs. PR: Registration in C. E. 102. Mr. Downs

209. **Highway Laboratory.** I. 2 Hrs. PR: M. 103. Mr. Downs

210. **Photogrammetry.** I. 2 Hrs. PR: C. E. 4s. Mr. Baker

211. **Photography Mapping.** I. 2 Hrs. PR: C. E. 1 and A. E. 120. Cameras; photographic missions; distortion, interpretation, and mapping methods. Primarily for seniors in Aeronautical Engineering. Mr. Baker

280. **Civil Problems.** I, II. S. 1 to 4 Hrs. Staff

GRADUATE DIVISION

351. **Advanced Water-Supply Engineering.** I, II. Credit to be arranged. PR: C. E. 116. Mr. Speiden

352. **Sewerage and Sewage Disposal.** I, II. Credit to be arranged. PR: C. E. 118. Mr. Speiden

353. **Advanced Design Problems.** I, II. Credit to be arranged. Mr. Davis and Mr. Speiden

354. **Statically Indeterminate Structures.** I, II. Credit to be arranged. PR: C. E. 204. Mr. Davis

355. **Soils Mechanics.** I, II. Credit to be arranged. Staff

397, 398. **Research.** I, II. Credit to be arranged. Mr. Davis and Mr. Speiden

Electrical Engineering

Professors FORMAN and HALL; Associate Professors E. C. JONES and SEIBERT; Assistant Professor REED; Instructor KEENER

UNDERGRADUATE DIVISION

3. **Introductory Electrical Engineering.** I, II, S. 2 Hrs. Mr. Seibert

*50. **Principles of Electron Tubes and Circuits.** II. 3 Hrs. PR: Phys. 113. Theory and applications of electron tubes and associated circuits. Mr. Seibert

*51. **Radio Receivers.** S. 4 Hrs. PR: E. E. 50. Theory and analysis of amplitude and frequency modulated receivers. Television receivers. With laboratory work. Mr. Seibert

*52. **Principles and Practice of Communications.** S. 4 Hrs. PR: E. E. 50. Lecture, recitation, and laboratory for radio and electronic technicians. Mr. Seibert

*53. **Propagation and Antenna Systems.** I. 3 Hrs. PR: E. E. 52. Lecture, recitation, and laboratory for radio and electronic technicians. Mr. Seibert

*54. **Radio Servicing.** I. 3 Hrs. PR: E. E. 51. Lecture, recitation, and laboratory for radio and electronic technicians. Mr. Seibert

*55. **Operation and Maintenance of Radio Transmitters.** II. 5 Hrs. PR: E. E. 53. Lecture, recitation, and laboratory. Credit for this course contingent on student passing Federal Communication Commission's radio telephone operator license examination. Mr. Seibert

*100. **Elements of Electrical Engineering.** II. 4 Hrs. Primarily for sophomores in electrical engineering. PR: Math. 108 (or registration in Math. 108); Physics 106 (or registration in Physics 106). Mr. Reed and Mr. Keener

*102, *103. **Elements of Electrical Engineering.** I and II respectively. 4 Hrs. each semester. For students in mechanical and mining engineering. Mr. Hall and Mr. Reed

104. **Illumination.** I, II. 2 Hrs. PR: Physics 106. Mr. Forman

110. **Elements of Electrical Engineering.** I, II. 5 Hrs. PR: Physics 106. For students in chemical, civil, and petroleum and natural gas option in mining engineering. Mr. Hall and Mr. Jones

124. **Thesis.** I, II. 2 to 5 Hrs. Special investigation or original research on some topic relating to electrical engineering. Mr. Forman and Mr. Hall

180, 181. **Electrical Problems.** I and II respectively. Credit to be arranged. For sophomores and juniors. Staff

230. **Direct-Current Machinery.** I. 3 Hrs. PR: E. E. 100. Mr. Jones and Mr. Reed

231. **Direct-Current Machinery Laboratory.** I. 2 Hrs. To accompany E. E. 230. Mr. Jones and Mr. Reed

235. **Alternating-Current Theory and Measurement.** I. 4 Hrs. PR: E. E. 100. Mr. Forman and Mr. Jones

237. **Principles of Alternating-Current Machinery.** II. 4 Hrs. PR: E. E. 102 or E. E. 235. Mr. Jones

239, 240. **Alternating-Current Machinery.** I and II respectively. 3 Hrs. each semester. PR: E. E. 237 accompanied by E. E. 241. Mr. Forman

241. **Electrical Engineering Laboratory.** I. 2 Hrs. To accompany E. E. 239. Mr. Reed

242. **Advanced Electrical Laboratory.** II. 2 Hrs. PR: E. E. 241. Advanced and special laboratory problems. Mr. Jones

244. **Electrical Calculations and Design.** II. 3 Hrs. PR: E. E. 102 or 230 and 237 (or registration in E. E. 237). Mr. Jones

245. **Electric Control.** I. 2 Hrs. PR: E. E. 237. Mr. Jones

247. **Electrical Power Transmission.** II. 3 Hrs. PR: E. E. 237 or 103. Mr. Hall

250. **Electronics.** II. 4 Hrs. E. E. 235. Theory of electronic devices, their characteristics, and application. Mr. Seibert and Mr. Keener

251. **Electrical Measurements Laboratory.** II. 1 Hr. To accompany E. E. 250 for communication majors. Mr. Seibert

253. **Radio Engineering.** I. 3 Hrs. PR: E. E. 250. Mr. Seibert

254. **Radio Engineering.** II. 3 Hrs. PR: E. E. 253. Mr. Seibert

255. **Radio Laboratory.** I. 3 Hrs. To accompany E. E. 253. Mr. Seibert

256. **Radio Laboratory.** II. 2 Hrs. To accompany E. E. 254. Mr. Seibert

257. **Aircraft Electrical Systems.** I. 3 Hrs. PR: E. E. 103. Remote indication control, heating, ignition, starting, and instruments. Mr. Seibert

258. **Aircraft Radio.** II. 3 Hrs. PR: E. E. 103. Communications, navigation, blind landing, and absolute altimeter. Mr. Seibert

260. **Electrical Communications.** I. 3 Hrs. PR: Math. 240 or 253. Mr. Forman

261. **Electrical Communications.** II. 3 Hrs. PR: E. E. 260. Mr. Forman

270. **The Electrical Industry as a Public Utility.** II. 3 Hrs. For seniors and graduates only. Economic principles involved in the selection and design of electrical equipment and in the utilization of electrical energy. Mr. Hall

274. **Industrial Applications of Electric Control.** I, II. 3 Hrs. For seniors or graduate students. Mr. Hall

280, 281. **Electrical Problems.** I and II respectively. Credit to be arranged. For junior, senior, and graduate students. Staff

282. **Symmetrical Components.** II. 3 Hrs. PR: E. E. 239. Mr. Forman

283. **Telephone Engineering.** I. 3 Hrs. PR: E. E. 235. Mr. Forman

110. **Business Law.** I, II. 3 Hrs. General principles of business law. The law Mr. Forman and Committee

284. **Transients.** II. 3 Hrs. PR: E. E. 235. Mr. Forman

285. **Electric Power Transmission and Distribution.** I, II. 3 Hrs. Advanced theory and calculation of transmission lines and networks. PR: E. E. 247. Mr. Hall

286. **Industrial Control.** II. 3 Hrs. PR: E. E. 245. Electrical control devices in industry, their application and use in the protection and control of electrical and mechanical equipment. Mr. Jones

GRADUATE DIVISION

397, 398. **Research.** I, II. Credit to be arranged. Advanced research or special investigations on some topic related to electrical engineering. Mr. Forman or Mr. Hall

General

Professors FORMAN and BOOMSLITER

UNDERGRADUATE DIVISION

1. **Engineering Lectures.** I. (No credit). Required of all freshmen in engineering. A series of lectures designed to acquaint the engineering student at the beginning of his course with the profession he has chosen. Mr. Boomsliter

101. **Engineering Society.** I, II. ½ Hr. Primarily for juniors. Required of all candidates for degrees in engineering. Membership, attendance, and active participation in Engineering Society. Mr. Forman and Committee

102. **Engineering Society.** I, II. ½ Hr. Continuation of G. 101. For juniors. Mr. Forman and Committee

103. **Engineering Society.** I, II. ½ Hr. For seniors. Continuation of G. 101 and 102. Mr. Forman and Committee

104. **Engineering Society.** I, II. ½ Hr. Continuation of G. 103. For seniors. Mr. Forman and Committee

110. **Business Law.** I, II. 3 Hrs. General principles of business law. The law of contracts. Standard contract forms. PR: Economics 103, 30, or 1 and 2. and M. 102. Mr. Boomsliter

Mechanical Engineering

DRAWING, MACHINE CONSTRUCTION, POWER ENGINEERING, MACHINE DESIGN, AND INDUSTRIAL ENGINEERING

Professor H. M. CATHER; Associate Professor GROW; Assistant Professor REYNOLDS; Instructors DELANEY, L. E. JONES, MARTIN, MURPHY, PIERCE, RUNNER and WASEMANN

UNDERGRADUATE DIVISION

*7. **Welding and Heat Treatment.** I, II. S. 1 Hr. Mr. Jones and Mr. Martin

*10. **Pipefitting.** I, II. 1 Hr. Mr. Martin and Mr. Runner

*11. **Machine Work.** I, II. S. 2 Hrs. Mr. Janes, Mr. Martin, and Mr. Delaney

*12. **Machine Work.** I, II. S. 1 Hr. Continuation of M. E. 11, which is a prerequisite. Mr. Jones, Mr. Martin, and Mr. Delaney

*15. **Welding, Forming, and Heat Treatment.** I, II, S. 2 Hrs. Molding and casting of ferrous and non-ferrous metals, oxy-acetylene welding, electric welding, resistance welding of plates, pipe, tubing, etc. Lectures, recitations, demonstrations, and shop practice. Mr. Martin and Mr. Jones

16. **Production Control.** I. 2 Hrs. PR: M. E. 11. The economic use of machine tools, planning assembly line manufacture, gauging, and inspection during the various processes of manufacture. Mr. Jones

*20. **Mechanical Drawing.** I, II. 3 Hrs. Staff

21s. **Mechanical Drawing.** SI. 2 Hrs. The use and care of drawing instruments, freehand sketching, and lettering. This course is intended for those who are teaching manual training in public schools. Mr. Cather

25. **Elements of Machine Design.** I, II. 2 Hrs. PR: M. E. 11 and M. E. 20. Empirical design, standard commercial parts; i.e., bearings, shafting, couplings, pulleys, keys, screw fittings, limits, tolerances and allowances, nomenclature. Staff

*26. **Descriptive Geometry.** I, II. 3 Hrs. PR: M. E. 20 and solid geometry. Staff

27. **Mechanism.** I, II. 2 Hrs. Lectures, recitations, and graphical solutions. PR: M. E. 20 and 26. Staff

*29. **Mechanism.** I, II. 4 Hrs. Lectures, recitations, and graphical solutions. PR: M. E. 20 and 26. Staff

*105. **Machine Construction.** I, II. 2 Hrs. PR: M. E. 12. Two three-hour periods. Mr. Jones and Mr. Martin

*106. **Shop Methods.** II. 2 or 3 Hrs. Continuation of M. E. 105. Two three-hour periods. Mr. Jones

*107. **Machine Construction.** Semester and credit to be arranged. Advanced work for special students. Continuation of M. E. 105 and 106. Mr. Jones

113. **Machine Design.** I, II. 4 Hrs. PR: M. 102 and M. E. 29. Two lectures and recitations and two three-hour computation periods. Mr. Pierce

122. **Mechanical Laboratory.** I, II. 2 Hrs. PR: M. E. 221 or registration in M. E. 221. Mr. Cather and Mr. Reynolds

123. **Engineering Laboratory.** 1. 2 Hrs. PR: M. E. 122. Mr. Reynolds

124. **Thesis.** I, II. 2 to 4 Hrs. Investigation or original research on some special topic relating to mechanical engineering. Staff

180, 181. **Mechanical Problems.** I, II. 1 to 3 Hrs. For sophomores and juniors.

203. **Advanced Machine Design.** I. 4 Hrs. Continuation of M. E. 113. Two lectures and recitations and two three-hour computation periods. Mr. Pierce

205. **Industrial Engineering.** I. 3 Hrs. Mr. Pierce

220. **Heat and Power Engineering.** I, II. 3 Hrs. PR: Phys. 105 and 107 and Math. 108 (or reg. in Math. 108). Mr. Cather and Mr. Reynolds

*221. **Thermodynamics of Engineering.** I, II. 3 Hrs. PR: Physics 105 and 107, and Math. 108 (or reg. in Math. 108). Mr. Cather and Mr. Reynolds

*222. **Heat Engines.** II. 3 Hrs. Continuation of M. E. 221. Mr. Cather and Mr. Reynolds

*223. **Steam Power Plants.** I. 3 Hrs. PR: M. E. 221. Mr. Cather

224. **Steam Turbines.** I, II. 3 Hrs. PR: M. E. 222. Mr. Cather

225. **Gas Engines and Gas Engineering.** II. 3 Hrs. Fuel gases, gas production and transmission, gas engines, etc. PR: M. E. 222. Mr. Cather

227. **Steam Power Plant Design.** II. 2 Hrs. Continuation of M. E. 223. Mr. Cather

228. **Engineering Laboratory.** II. 2 Hrs. PR: M. E. 123. Mr. Cather

229. **Internal Combustion Engines.** II. 2 Hrs. PR: M. E. 222. Mr. Cather

250. **Heating, Ventilating, and Air Conditioning.** I, II. 3 Hrs. PR: M. E. 220 or 222. Methods and systems of heating, ventilating, and air conditioning of various types of buildings, types of controls, and their applications. Mr. Cather

260. **Motion and Time Study.** II. 3 Hrs. Process and operation analysis essential to increasing efficiency of manufacturing and decreasing worker fatigue. Mr. Pierce

270. **Industrial Lubrication.** I, II. 3 Hrs. PR: M. 102 and M. 104. Characteristics of crudes, refining methods, testing specifications, selecting, applications, and purification of oils and greases for industrial use.

280, 281. **Mechanical Problems.** I, II. 1 to 3 Hrs. For juniors, seniors, and graduates. Staff

GRADUATE DIVISION

397, 398. **Research.** I, II. Credit to be arranged. Investigation or original research on some special topic relating to mechanical engineering. Mr. Cather and Staff

Mechanics

Professor BOOMSLITER, Associate Professor C. H. CATHER; Assistant Professor WORRELL

UNDERGRADUATE DIVISION

*101. **Statics.** I, II. 3 Hrs. PR: Math. 108 (or registration in Math. 108), and Physics 105 and 107. Staff

*102. **Mechanics of Materials.** I, II. 4 Hrs. PR: M. 101. Staff

*103. **Materials Testing Laboratory.** I, II. 1 Hr. PR: M. 102 or registration in M. 102. Staff

*104. **Kinetics.** I, II. 3 Hrs. Continuation of M. 101. PR: M. 101. Staff

200. **Advanced Mechanics of Materials.** I or II. 2 to 4 Hrs. PR: M. 102. Staff

201. **Advanced Kinetics.** I or II. 3 Hrs. PR: M. 101 and 104. Staff

202. **Advanced Materials Laboratory.** I or II. 2 to 4 Hrs. PR: M. 102. Staff

COURSES IN THE SCHOOL OF MINES

Associate Professor HOLLAND; Instructors SANDY and HOWARD

UNDERGRADUATE DIVISION

100. **Mine Surveying.** I. 2 Hrs. PR: C. E. 1. Mr. Sandy and Mr. Laird

101. **Mine Surveying.** II. 2 Hrs. PR: E. M. 100. Mr. Sandy and Mr. Laird

102s. **Mine Surveying.** SI. 5 Hrs. This course is a continuation of and gives field practice supplementing E. M. 101. It must be taken during the summer term immediately following the semester in which E. M. 101 is taken. Mr. Sandy and Mr. Laird

*106. **Elementary Mineralogy.** I, II. 1 or 2 Hrs. PR: Chemistry 4. Mr. Martens

107. **Mining Methods.** I. 4 Hrs. Inspection trips, with written reports, are required. PR: Physics 106 and Geology 1. Mr. Sandy

111. **Mining.** I. 2 Hrs. Explosives, timbering, drilling, and shaft sinking. PR: Chemistry 6 and Physics 106. Mr. Sandy

114. **Mine Management.** II. 2 Hrs. PR: E. M. 212. Mr. Holland

115. **Mine Design.** I. 2 Hrs. PR: E. M. 212 and registration in C. E. 122. Mr. Holland

116. **Mine Design.** II. 3 Hrs. Continuation of E. M. 115, which is prerequisite. Mr. Holland

117. **Industrial Safety Engineering.** I. 3 Hrs. PR: Senior standing. Mr. Sandy

118. **Coal Preparation.** II. 3 Hrs. PR: M. E. 212 and 202. Mr. Sandy

119. **Mine Equipment and Machinery.** II. PR: E. E. 102 and E. M 212. Mr. Holland

120. **Thesis.** I, II. 2 to 4 Hrs. An individual problem on some phase of mining. None but exceptional students having high scholastic standing will be permitted to elect this course. Mr. Holland

*201. **Oil-Field Development.** I. 2 Hrs. PR: Geology 3. Mr. Laird

202. **Coal Laboratory.** I, II. 1 Hr. Coal Analysis. PR: Chemistry 6 or Chem. 15. Mr. Sandy

*203. **Geological Surveying.** II. 2 Hrs. PR: E. M. 101 and Geology 161. Mr. Laird

204. **Oil and Gas Production.** II. 4 Hrs. PR: E. M. 201 and M. 101. Mr. Laird

205. **Gas Measurement Engineering.** II. 2 Hrs. PR: E. M. 201 and C. E. 115. Staff

212. **Coal Mining.** II. 4 Hrs. Haulage, hoisting, and drainage. PR: E. M. 111. Mr. Sandy

213. **Mine Ventilation.** I. 3 Hrs. PR: E. M. 212 and 107. Mr. Holland

GRADUATE DIVISION

301, 302. **Advanced Mine Design.** I, II. Credit to be arranged. Advanced detail design and layout of coal mine plant, particularly incorporating new ideas of machines and mining methods. Staff

351s. **Coal Mining.** SI. 3 Hrs. PR: Chemistry 10 hours, physics 8 hours, and accompanied or preceded by general geology. This course is designed especially for students who are planning to teach mining subjects in high school, and is not open to students taking E. M. 102s, 111, and 212. Hours to be arranged. Mr. Holland

397, 398. **Research.** I, II. Credit to be arranged. An individual problem in some phase of mining. A carefully prepared report is required. Mr. Holland

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The Graduate School

ORGANIZATION

By order of the Board of Governors of West Virginia University a University Graduate School is established, whose roots are implanted in all University undergraduate work, irrespective of departments or schools. The Graduate School is empowered (1) to direct research and investigation with particular reference to problems of the state and (2) to train and recommend to the Board of Governors candidates for the degrees of Master of Science, Master of Science in Home Economics Education, Master of Science in the various Engineering branches, Master of Arts, Master of Music, and Doctor of Philosophy.

All regulations governing the Graduate School such as the determination of curricula, projects, majors, minors, standards, thesis requirements, and like and similar matters shall be formulated by the Graduate Council and presented to the Graduate Faculty for its consideration and action.

THE STUDENT BODY

Seniors in the colleges of West Virginia University who are within 10 semester hours of graduation may, with the approval of the Graduate Council, enroll for courses in the Graduate School, for which they may receive graduate credit after obtaining their bachelors' degrees. Such graduate courses must not have been offered for undergraduate credit, and in every case permission must have been requested before or at the time of enrolling for the course or courses.

THE ADVISER

The adviser will arrange a specific course of study to be approved by the Council and, in the case of candidates for advanced degrees, will preside at the candidate's qualifying and final examination.

REQUIREMENTS FOR GRADUATE DEGREES

(For a List of Graduate Degrees Offered see page 59.)

GENERAL REGULATIONS

1. *Candidacy*:

Admission to candidacy for any graduate degree is conditioned upon the fulfillment of the requirements for admission to the Graduate School, and also the particular requirements of undergraduate preparation for the field of study in which the student wishes to specialize. Detailed information concerning candidacy for the Master's degree and the degree of Doctor of Philosophy may be found on the pages immediately following.

2. *Scholarship*:

No credits are acceptable toward an advanced degree which are reported with a grade lower than C.

Reasonable standards of oral and written English must be maintained.

3. *Curriculum*:

Credit toward a graduate degree may be obtained only for courses listed in this Catalogue and numbered 200-399.

No more than fifteen hours of graduate courses in any one semester nor more than six hours of graduate courses in any one term of the summer session may be carried by a student. Any exceptions to this rule must be approved in advance by the Graduate Council.

4. *Residence and Extension*:

Residence credit for special field assignments and for work taken off the University Campus shall be allowed only with the prior approval of the Graduate Council.

No more than 15 hours of extension work may be counted by any one student toward the Master's degree.

The maximum credit that students pursuing graduate work by extension may receive in any one field shall be 8 semester hours.

No more than 6 hours of graduate credit obtained in other approved institutions may be considered in meeting the requirements for the Master's degree in West Virginia University. Graduate credit so accepted toward the Master's degree must meet the usual departmental requirements for a continuous and unified program of graduate study and will reduce correspondingly the number of hours of graduate work by extension offered in West Virginia University extension centers that may be offered in meeting the requirements for the Master's degree.

The time during which credit may be acquired in extension offered by institutions outside the state shall be limited in any area as determined by the University Committee on Extension and properly publicized by the Director of Extension.

Each graduate student in residence, whether taking course work or engaged in conducting research or in writing a thesis or report, must register at the beginning of each semester or term during which graduate work is being done. He must be registered during the session in which he is to appear for final examination. Under exceptional conditions and with the prior approval of the Graduate Council a graduate student may be permitted to meet a portion of the requirements for the degree in absentia, provided the customary residence and other requirements are met.

The Graduate Council will allow credit for educational experience in the Armed Forces in partial satisfaction of advanced degree requirements for courses of the 200-399 series established by the Committee on Entrance by evaluation and/or by examination. Such credit, however, will not serve to reduce graduate degree residence requirements.

5. *Theses and Problem Reports*:

All theses and problem reports shall be presented in the form prescribed by the Graduate Council at least one month previous to the Commencement Day on which the degree is expected. If the thesis or problem report is accepted, typewritten and bound copies shall be submitted to the Secretary of the Graduate Council at least one week before the degree is to be conferred; a minimum of five copies of the master's or doctor's thesis or problem report is required.

6. *Final Examinations*:

The candidate shall not be eligible for the final examination until his thesis or problem report has been approved by the examining committee. Following the approval of the candidate's thesis or problem report and the satisfactory completion of the courses in residence and the satisfaction of other graduate requirements, he shall be given a final examination by his advisory committee.

7. *Commencement*:

At the time of registration for the semester or session in which the candidate expects to receive a graduate degree, he shall submit a formal request to the Chairman of the Graduate Council for the conferring of such degree. The candidate must have completed all requirements for the degree which he wishes to receive, at least one week before Commencement Day.

THE DEGREES OF MASTER OF ARTS AND MASTER OF SCIENCE

Requirements for Candidacy

Satisfactory fulfillment of General Regulation No. 1 for graduate degrees (stated on page 229) will admit an applicant to candidacy.

Requirements for Completion

The completion within a period of 7* years immediately preceding the conferring of the degree except with the permission of the Graduate Council, of no less than 30 credit hours of graduate work approved by the adviser.

RESIDENCE: A minimum is required of two semesters, or one semester and three summer terms, or five summer terms of residence in full-time graduate study at West Virginia University. For students offering 15 credit hours

*This ruling is temporarily discontinued.

in extension, a minimum period of residence at West Virginia University of one semester or three summer terms shall be required for the Master's degree.

THESIS OR PROBLEM REPORT: A thesis or problem report granting no more than 6 hours of credit may be required by the faculty of the college, school, or department in which the candidate's major interest lies.

FINAL EXAMINATION: An examination, oral or written or both at the option of the candidate's examining committee, shall be required, covering the candidate's thesis or problem report, studies in his major and minor fields, and his ability to apply facts and principles.

SPECIAL REQUIREMENTS: The candidate must meet the special requirements of the department in which he pursues his major study.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Requirements for Candidacy

Admission to the Graduate School and enrollment in graduate courses does not of itself imply acceptance of the applicant for a doctor's degree. After a period of residence the applicant will be admitted to a comprehensive preliminary or qualifying examination (either oral or written or both) in which he must demonstrate (a) a grasp of the important phases and problems of the field of study in which he proposes to major and an appreciation of their relation to other fields of human knowledge and accomplishments, (b) the ability to employ rationally the instruments of research that have been developed in his major field, and (c) the ability to read French and German to the satisfaction of his examining committee.[1]

When an applicant has successfully passed his qualifying examination he will be formally promoted to candidacy for the doctor's degree. Admission to candidacy must precede the final examination for the doctor's degree by at least one academic year. Graduate courses pursued in fulfillment of the requirements for the Master's degree, if of suitable character and quality, may be credited toward the doctorate.

Requirements for Completion

(a) CURRICULUM: The degree of Doctor of Philosophy is not awarded for the mere accumulation of course credits nor for the completion of a definite residence requirement. The exact amount and nature of course work to be undertaken by a candidate will be determined in the light of his previous preparation and the demands of his chosen field of application. The aggregate of correlated courses of graduate instruction should, however, be no less than 60 semester hours, exclusive of research or thesis, except research or thesis credits earned for the Master's degree. These credits shall be ordered and distributed so as to promote broad and systematic knowledge and the ability to carry on independent research.

(b) RESIDENCE: In general the requirements for the Doctor of Philosophy degree contemplate at least three years of full-time graduate work beyond the bachelor's degree. A minimum of 36 weeks in residence in full-time graduate study at West Virginia University is required.

[1]With the approval of the Graduate Council, one other language may be substituted for French or German.

(c) THESIS: The candidate must submit a thesis pursued under the direction of the faculty of this University on some problem in the field of his major interest. The thesis must present the results of the candidate's individual investigations and must embody a definite contribution to knowledge.

(d) SPECIAL REQUIREMENTS: The candidate must satisfy such special requirements subject to the approval of the Graduate Council, as may be required by the faculty of the college or department in which his major lies. All required examinations in modern languages shall be taken not later than one academic year before the final examination for the degree.

(e) FINAL EXAMINATION: If the candidate's thesis is approved and he has fulfilled all other requirements stated above, he will be admitted to final oral examination on his thesis before his examining committee. At the option of this committee, a comprehensive written examination may also be required.

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The School of Journalism

GENERAL INFORMATION

History

The first instruction in journalism at West Virginia University consisted of a two-hour course in news writing offered in 1915 in the Department of English of the College of Arts and Sciences. A sequence of professional courses was inaugurated by the same department in 1920. As the demand increased, a complete professional curriculum was made available. In 1927 an additional full-time instructor was engaged, larger quarters were obtained, and a separate Department of Journalism was created.

In consequence of the substantial development over nearly two decades and in view of the rapid advancement of professional schools of journalism throughout the nation, the University Board of Governors on April 22, 1939, separated the journalism unit from the College of Arts and Sciences and reorganized it as a School of Journalism with an administrative status similar to that of other schools and colleges of the University. Since that time the School has conferred the degree of Bachelor of Science in Journalism on 87, of whom 28 are men. Since 1920 the University has graduated 252 persons, of whom slightly more than half are men, with journalism as a major field of study. A fourth full-time instructor was added in 1946.

Aims

The main purposes of the school are these: (1) to find and prepare superior young men and young women who contemplate reporting and other journalistic writing, or the editing and management of newspapers or special periodicals, as a career; (2) to provide in addition to thorough and complete technical training the broad informational background and sure intellectual discernment that distinguish educated persons; (3) to cultivate a full sense of the responsibility that modern newspaper men and women must assume in their relation to the community, state, and nation, and familiarize them

with tested procedure in pursuing objectives of high social value; (4) to stimulate an inquiring attitude toward journalism as an institution and promote scholarly research in its various branches; (5) to furnish a suitable educational foundation for persons looking forward to business or professional work closely related to journalistic practice.

Standards

From the beginning the instruction in journalism at West Virginia University has been in accord with the best professional-school standards. The emphasis has ever been on quality, not numbers. Only students with a scholastic rating of approximately B or higher have been encouraged to take the basic courses in reporting, and those not able to maintain an equally high standard in the first journalism courses have been requested to choose a major elsewhere.

The instructional staff has been engaged with careful attention to their individual ability to give expert instruction in particular fields. The curriculum has been kept constantly abreast of progress in leading educational centers. Class sizes have never reached proportions where individual instruction had to be sacrificed. The school now conforms to recognized national standards, especially those required by the American Society of Journalism School Administrators, and is ranked with the superior professional schools of the United States.

Practice Opportunities

Opportunities for applying the principles of sound newspaper practice are good. The Daily Athenaeum, a five-day campus newspaper, is produced by journalism students in the various workrooms of the school where laboratories are conducted from 2 to 5 p. m. and from 7:30 to 10:30 p. m. every day except Saturday and Sunday. Reporters working on news runs cover the University community thoroughly, and trained deskworkers not only edit the local reporters' copy but also prepare for publication the dispatches of state, national, and world origin received by United Press teletype. Local pictures are taken by the campus newspaper's own staff photographer, and other news pictures are selected from mats purchased from a national distributor.

All reporters serve as correspondents of weekly and daily newspapers. Some get additional practice by working part-time for Morgantown dailies or by taking vacation positions on newspapers of their home community. Majors are especially urged to obtain vacation work on a good weekly or daily newspaper during the summers that precede their junior and senior years. As a rule, student journalists have staff positions on, or are regular contributors to, other campus publications.

ADMISSION

Regular Students

A candidate seeking admission to the School of Journalism with the view of obtaining a degree must have satisfied the requirements for matriculation in one of the University undergraduate colleges and must have earned at least 58 semester hours of college credit. A student deficient in physical

education and military science will be required to obtain them as soon as possible.

During his freshman and sophomore years he should have completed satisfactorily all or most courses specified for pre-journalism majors. A regularly enrolled student may elect courses numbered below 100 provided such action will be advantageous in connection with a major or minor sequence and provided the total credit value of such courses does not exceed 12 hours. For all such courses, however, in excess of 6 hours taken during any one semester the maximum number of honor points that may be acquired will be one for each hour of credit. A pre-journalism student not maintaining at least a C average during his first two years in all college subjects is strongly advised not to enroll in the professional school.

Typewriting and Shorthand

Before or soon after entering the University, a student planning to become a journalism major should learn the touch system of typewriting. From the beginning every reporter is expected to submit copy in neat typewritten form and to have a typing speed of no fewer than 40 words a minute. If after 8 weeks the reporter cannot demonstrate such typing ability, he may be asked to withdraw from the reporting course. He will find it especially advantageous to have his own machine.

Since shorthand is of great practical value and frequently aids a graduate in obtaining a position, all students, especially those expecting to become secretaries or assistants to executives, are urged to learn it before coming to college or during their freshman or sophomore year.

The Degree

A candidate who has satisfied all general requirements of the University and who as a regularly enrolled student of the School of Journalism has earned 64 semester hours of credit of a value specified in the foregoing and in the subjects listed in one of the professional curricula hereinafter outlined will be recommended for the degree of Bachelor of Science in Journalism, provided the combined number of his credits acquired as a pre-journalism student and as a regularly enrolled journalism major totals no fewer than 128. As a minimum professional requirement, 25 of the 64 semester credits earned after the student has enrolled in the school must be obtained in journalism subjects. Moreover, no fewer than 60 of the 64 hours mentioned above shall be obtained in courses numbered between 100 and 300.

To be eligible for graduation, a student must have completed 12 semester hours in one language or 6 semester hours in each of two foreign languages in college; or he must have offered 2 units in a modern foreign language for entrance and must have completed 6 hours in the same language in college. He must also have acquired 8 hours of credit in one of the following laboratory sciences: botany, chemistry, geology, physics, psychology, zoology, and biology.

The Minor Field

Since the prospective newspaper worker needs the broadest and most thorough education possible, he will find his opportunities and usefulness enlarged if while in the professional school he devotes himself to a second field of concentration. To meet the requirements for a minor, he must earn at least twelve semester hours of credit in some other subject than journalism, nine of which must be in junior and senior courses.

Minors especially recommended for journalism students are business administration, economics, education, English, history, political science, and sociology. Since there is a growing demand for journalistic writers who can interpret developments in agriculture, astronomy, chemistry, home economics, physics, and other related subjects, students with sufficient technical background will be encouraged to select a minor in one of these scientific fields.

CURRICULA

The School of Journalism offers three curricula designed to fit students for specialized branches of journalistic practice or for occupations or professions for which journalistic training is desirable or necessary preparation. Each sequence leads to the degree of Bachelor of Science in Journalism.

The News-Editorial Curriculum

The news-editorial sequence is designed primarily for the student who wishes to prepare himself for work as a reporter, copyreader, special writer, or departmental editor and who hopes to advance later to a still more responsible position in the general news and editorial field.

THE THIRD YEAR

First Semester	*Hrs.*
Jour. 103—Copy Editing	3
Jour. 105—Applied Newspaper Management	2
Jour. 127—Hist. of American Jour.	3
Jour. 113—Principles of Advertising	3
Pol. Sci. 106—Amer. State and Local Government	3
Electives	2-4
	16-18

Second Semester	*Hrs.*
Jour. 104—Copy Editing	3
Jour. 106—Applied Newspaper Management	2
Soc. 101—Intro. to Sociology	3
Jour. 220—Newspaper and Magazine Article Writing	3
Eng. 142—Shakespeare	3
Advanced Political Science	3
Electives	2-4
	16-18

THE FOURTH YEAR

First Semester	*Hrs.*
Jour. 230—Editorial Writing and Policy	3
Jour. 221—Critical Writing	2
Eng. 181—Bible Literature	3
Phil. 104—Intro. to Philosophy	3
Electives	5-7
	16-18

Second Semester	*Hrs.*
Jour. 231—Social Responsibility of Journalism	3
Jour. 128—Adv. Reporting	3
Jour. 210—Law of the Press	2
Advanced social science or literature or language	3-7
Electives	8-10
	16-18

The Advertising-Management Curriculum

The advertising-management professional sequence is arranged for the student who expects to enter some branch of the business department of a newspaper and who looks forward sooner or later to the management or ownership of a publication. Opportunities in the business department are considered even better than in the news-editorial branch.

THE THIRD YEAR

First Semester	*Hrs.*
Jour. 103—Copy Editing	3
Jour. 105—Applied Newspaper Management	2
Jour. 110—Newspaper Typography	2
Jour. 113—Principles of Advertising	3
Pol. Sc. 106—Amer. State and Local Government	3
Bus. 5—Principles of Accounting	3
Electives	0-2
	16-18

Second Semester	*Hrs.*
Jour. 106—Applied Newspaper Management	2
Jour. 112—Publicity, Propaganda, and the Public Mind	2
Jour. 114—Advertising Copy and Sales	4
Geol. 109—Economic Geography	3
Bus. 6—Principles of Accounting	3
Electives	2-4
	16-18

THE FOURTH YEAR

First Semester	*Hrs.*
Jour. 230—Editorial Writing and Policy	3
Eng. 142—Shakespeare, or Eng. 181—Bible Literature	3
Soc. 101—Intro. to Sociology	3
Econ. and Bus. Administration	6
General Electives	1-3
	16-18

Second Semester	*Hrs.*
Jour. 108—Community Newspaper	2
Jour. 231—Social Responsibility of Journalism	3
Jour. 128—Adv. Reporting	3
Jour. 210—Law of the Press	2
Pol. Sci. 107—Amer. City Gov't.	3
Econ. and Bus. Administration	3-5
	16-18

The General Curriculum

The general curriculum is planned for the following classes of majors: (a) those wishing to make journalism a special field of concentration while getting a broad, general education of modern content; (b) those expecting to follow radio journalism as a career; (c) those preparing to take a position in high school as teacher of journalism, English, and social sciences and as director of student publications; (d) those looking forward to work on specialized business and trade periodicals, on household magazines and newspaper women's pages, or on agricultural and scientific publications; (e) those desiring to be public-relations writers or directors or to enter the Federal or state civil service; and (f) those fitting themselves for secretaries or assistants to executives.

THE THIRD YEAR

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Jour. 103—Copy Editing	3	Jour. 112—Publicity, Propaganda, and the Public Mind	2
Jour. 127—Hist. of Amer. Journalism	3	Jour. 220—Newspaper and Magazine Article Writing	3
Soc. 101—Intro. to Sociology	3	Geol. 109—Economic Geography	3
Pol. Sc. 106—Amer. State and Local Government	3	Electives in second field of concentration*	8-10
Electives in second field of concentration*	4-6		
	16-18		16-18

THE FOURTH YEAR

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Jour. 230—Editorial Writing and Policy	3	Jour. 108—Community Newspaper	2
Jour. 221—Critical Writing or Advanced Eng. Composition	2	Jour. 128—Adv. Reporting	3
Jour. 113—Principles of Advertising	3	Jour. 231—Social Responsibility of Journalism	3
Phil. 104—Intro. to Philosophy	3	Electives in second field of concentration*	8-10
Eng. 142—Shakespeare	3		
Electives in second field of concentration*	2-4		
	16-18		16-18

GRADUATE STUDY

Although at the present time the School of Journalism is devoting its instructional facilities chiefly to professional curricula that lead to the degree of Bachelor of Science in Journalism, it frequently provides a graduate minor for students taking the master's degree in a field of specialization related to journalism.

THE PLACEMENT OF GRADUATES

During the last two and one-half decades alumni who had completed all or most of the professional courses in journalism have found little difficulty in finding desirable positions. Although the school cannot guarantee positions to graduates, it is glad to assist them in learning of openings and in making contact with employers. To this end it maintains without charge a placement register for both current and past graduates. Students and alumni are also invited to make free use of the University Placement Service in charge of H. E. Stone, secretary of loans and placement.

*In his second field of concentration a student pursuing the General Curriculum must acquire, before graduation, at least 18 hours of credit in subjects bearing directly on his contemplated vocation. In sequence (b), he will give special attention to newscasting, news commentary, continuity writing, program building, commercial copywriting, and radio advertising. In sequence (c), he will take 20 hours of professional-education courses. In sequence (f), he will include business mathematics, business communications, secretarial training, a year of shorthand, and other similar courses adapted to his anticipated vocational need.

COURSES OF INSTRUCTION

Professor REED; Assistant Professors BELL and SORELLE; Instructor BOND

Abbreviations used in the announcements have the following meaning: I, a course given the first semester; II, a course given the second semester; I, II, a semester course given during each semester; Hrs., number of credit hours per course; PR, prerequisite.

The following system of course numbering is employed: Courses 1-99, intended primarily for sophomores; courses 100-199, intended primarily for juniors and seniors; courses 200-299, advanced courses open to juniors, seniors, and graduate students.

1A. **Introduction to United States Journalism.** II. 1 Hr. PR: English 1 with a grade of C or higher. Required of pre-journalism freshmen and open to others. Staff

1. **Newspaper Reporting.** I, II. 3 Hrs. Two lectures and three laboratory hours. Students are required to know how to use typewriter or to acquire such knowledge during the first half of the semester. PR: English 1 and 2, with an average of 1.5 or higher for the two courses. Staff

2. **Newspaper Reporting.** I, II. 3 Hrs. Two Lectures and three laboratory hours. Continuation of Journalism 1, which is prerequisite. Staff

103. **Copy Editing.** I. 3 Hrs. PR: Journalism 1 and 2 or consent of instructor. Mr. Bond

104. **Copy Editing.** II. 3 Hrs. PR: Journalism 103 or consent of instructor. Mr. Bond

105. **Applied Newspaper Management.** I. 2 Hrs. One lecture and two laboratory hours. PR: Journalism 1 and 2 or consent of instructor. Mr. Bell

106. **Applied Newspaper Management.** II. 2 Hrs. One lecture and two laboratory hours. PR: Journalism 1, 2, and 105 or consent of instructor. Mr. Bell

108. **The Community Newspaper.** II. 2 Hrs. PR: Journalism 1 and 2 or consent of instructor. Mr. Bell

110. **Newspaper Typography.** I, II. 2 Hrs. PR: Journalism 1 and 2 or consent of instructor. Mr. Bell

112. **Publicity, Propaganda, and the Public Mind.** II. 2 Hrs. Miss Sorelle

113. **Principles of Advertising.** I. 3 Hrs. Mr. Bell

114. **Advertising Copy and Sales.** I, II. 4 Hrs. Practical application of advertising principles, with stress on newspaper advertising. Preparing newspaper layouts, writing retail copy, and servicing local newspaper accounts. Two lecture and conference hours and five laboratory hours a week. Limited enrollment. PR: Jour. 113 or adequate grounding in advertising principles. Mr. Bell

120. **News Photography.** I, II. 2 Hrs. PR: Journalism 1 and 2 or consent of instructor. Miss Sorelle

122. **Elements of Radio Journalism.** I. 2 Hrs. One lecture and two laboratory hours. PR: Journalism 1 and 2 or consent of instructor. Miss Sorelle

123. **Advanced Radio Writing.** II. 2 Hrs. One lecture and two laboratory hours. PR: Journalism 1 and 2 and Journalism 122 or consent of instructor. Miss Sorelle

127. **History of American Journalism.** I. 3 Hrs. Miss Sorelle

128. **Advanced Reporting.** II. 3 Hrs. For seniors in journalism. Mr. Bond

210. **Law of the Press.** II 2 Hrs. For seniors and graduates. Miss Sorelle

215. **High-school Journalism and Student Publications.** II. 2 Hrs. Mr.Bell

220. **Newspaper and Magazine Article Writing.** II. 3 Hrs. For juniors, seniors, and graduates. Mr. Reed

221. **Journalistic Critical Writing.** I. 2 Hrs. For seniors and graduates. Mr. Reed

230. **Editorial Writing and Policy.** I. 3 Hrs. For seniors and graduates. Mr. Reed

231. **Social Responsibility of Journalism.** II. 3 Hrs. For seniors and graduates. Mr. Reed

The College of Law

HISTORY AND ORGANIZATION

The College of Law, established in 1878, is the oldest professional school in the University.

In 1897 the course of study was increased from one year to two years. Since 1912 the degree of Bachelor of Laws has been conferred only upon the satisfactory completion of three years of law-school work. From 1913 to 1924 the requirement for admission was one year of college work; from 1924 to 1931 the requirement was two years. Since 1931 the minimum pre-law requirement for the degree has been three years of work of collegiate grade in an institution of approved standing.

In 1914 the College of Law was admitted to membership in the Association of American Law Schools, which is an organization of leading schools for the purpose of maintaining high standards in legal education. The College of Law is on the list of schools approved by the American Bar Association.

THE PROGRAM OF INSTRUCTION[1]

It is the primary aim of the Law School to give the student an adequate preparation for the practice of law. This involves not merely imparting a knowledge of the legal rules and other materials which courts employ, but also, what is equally important, a training in the technique of legal thinking. The work of the student is based chiefly upon the study and discussion of decided cases and statutes, with collateral reading of textbooks and periodicals, elucidated by free discussion in the class. Special emphasis is given to those West Virginia cases and statutes which differ from the general law. Within limits, the school also seeks to inculcate an appreciation of the place of law in the ordering of society and to consider the problem of how law may more effectively adjust human relations.

The following program of instruction is designed with these ends in view. The work of the first year is prescribed. All courses other than first-year courses are elective. Neither fewer than 13 nor more than 16 hours may be carried without the consent of the Committee on Scholarship.

FIRST-YEAR COURSES

Agency. 2 Hrs.

Two hours a week in the second semester. Mechem, Cases on Agency (3rd ed.). Mr. Colson

Common Law Remedies. 2 Hrs.

Two hours a week in the first semester. Cook, Readings on Forms of Action at Common Law. Mr. Carlin

Contracts. 6 Hrs.

Four hours a week in the first semester, two hours a week in the second semester. Williston, Cases on Contracts (4th ed.). Mr. Donley

[1]The program of courses as given here is subject to change.

Criminal Law. 3 Hrs.
Three hours a week in the first semester. Harno, Cases on Criminal Law and Procedure (2d ed.). Mr. Lugar

Equity I. 3 Hrs.
Three hours a week in the second semester. Walsh, Cases on Equity. Mr. Lugar

Personal Property. 2 Hrs.
Two hours a week in the second semester. Casebook to be announced. Mr. Goodwin

Real Property I. 4 Hrs.
Four hours a week in the first semester. Aigler, Cases on Titles (3d ed.). Mr. Goodwin

Torts. 6 Hrs.
Six hours a week in each semester. Bohlen, Cases on Torts (4th ed. by Harper). Mr. Dickinson

COURSES OPEN TO SECOND-YEAR AND THIRD-YEAR STUDENTS

Administrative Law. 4 Hrs.
Four hours a week in the first semester. Gellhorn, Cases on Administrative Law (2d ed.). Mr. Abel

Coal, Oil and Gas. 3 Hrs.
Three hours a week in the second semester. Kulp, Cases on Oil and Gas. Mr. Donley

Common Law Pleading (including Drafting of Pleadings). 4 Hrs.
Four hours a week in the second semester. Sunderland, Cases on Common Law Pleading (2d ed.). Mr. Carlin

Constitutional Law. 4 Hrs.
Four hours a week in the second semester. McGovney, Cases on Constitutional Law and Supplement. Mr. Abel

Corporations. 4 Hrs.
Four hours a week in the first semester. Dodd and Baker, Cases on Business Associations, Corporations. Mr. Colson

Credit Transactions. 4 Hrs.
Four hours a week in the first semester. Sturges, Cases on Credit Transactions. Mr. Colson

Damages. 2 Hrs.
Two hours a week in the first semester. McCormick, Cases on Damages. Mr. Dickinson

Equity II. 3 Hrs.
Three hours a week in the first semester. Walsh, Cases on Equity. Mr. Lugar

Equity Pleading and Practice. 2 Hrs.
Two hours a week in the first semester. Prerequisite: Common Law Pleading. Clephane, Equity Pleading and Practice, and selected cases and statutes. Mr. Carlin

Evidence. 5 Hrs.
Five hours a week in the first semester. Morgan and Maguire, Cases on Evidence (2d ed.). Mr. Hardman

Future Interests. 3 Hrs.
Three hours a week in the second semester. Casebook to be announced. Mr. Goodwin

Insurance. 2 Hrs.
Two hours a week in the first semester. Patterson, Cases on Insurance (2d ed.). Mr. Lugar

Landlord and Tenant. 2 Hrs.
Two hours a week in the second semester. Jacobs, Cases on Landlord and Tenant (2d ed.). Mr. Carlin

Municipal Corporations. 2 Hrs.
Two hours a week in the second semester. Tooke and McIntire, Cases on Municipal Corporations (3d ed.). Mr. Colson

Negotiable Instruments. 3 Hrs.
Three hours a week in the second semester. Smith and Moore, Cases on Bills and Notes (3d ed.). Mr. Dickinson

Practice and Procedure. 4 Hrs.
Four hours a week in the first semester. Prerequisite: Common Law Pleading. Selected cases, statutes, and lectures. Mr. Carlin

Practice Court. 2 Hrs.
Two hours a week in the second semester. Prerequisite: Common Law Pleading and Practice and Procedure. Mr. Carlin

Public Utilities. 4 Hrs.
Four hours a week in the second semester. Casebook to be announced. Mr. Hardman

Quasi Contracts. 2 Hrs.
Two hours a week in the first semester. Casebook to be announced. Mr. Donley

Sales of Personal Property. 3 Hrs.
Three hours a week in the first semester. Vold, Cases on Sales. Mr. Abel

Taxation. 4 Hrs.
Four hours a week in the second semester. Casebook to be announced. Mr. Abel

Trusts. 4 Hrs.
Four hours a week in the second semester. Scott, Cases on Trusts (3d ed.). Mr. Colson

THE PRACTICE COURT

Supplementing the procedural courses and, in particular, the courses in Practice and Procedure, the College of Law conducts a Practice Court under the instruction and direct supervision of a member of the faculty. Its primary purpose is to give the students practical experience in coordinating and applying, in an actually litigated case, the legal knowledge which they have acquired in their classroom courses. The cases are tried exactly as they would be tried in an ordinary court. The first session is presided over by Professor Carlin, who has charge of the course in Practice Court, and the other sessions are presided over by a judge of the Supreme Court of Appeals or of one of the circuit courts of West Virginia.

The court exercises original jurisdiction in law and equity, and appellate jurisdiction in appeals from inferior tribunals. Statements of facts are furnished, such as would be related to a lawyer in active practice by his client. Each student must determine whether or not upon such facts the particular case in hand is one of common law or equity. He must then frame his pleadings, serve his summons or notice, and answer his adversary's pleadings until issue is joined in legal manner. Thereupon the case is brought on for trial or hearing in strict accordance with legal procedure, witnesses are examined and cross-examined, and the case is conducted through all the various stages of trial or hearing down to and including the judgment, decree, or sentence; after which, should the case be appealed, it must be carried through the Supreme Court, involving the preparation of the record on appeal, briefs of counsel, and argument.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF LAWS

The degree of Bachelor of Laws is conferred upon those who have met the requirements for entrance to the College of Law as candidates for this degree and who have satisfactorily passed examinations in courses aggregating eighty-one credit hours, distributed over three years' residence, and who have obtained an average grade of C[1] as hereinafter provided. Except with the permission of the Scholarship Committee these eighty-one hours must be taken in no more than six semesters or the equivalent thereof in summer school, and the last twenty-seven hours of work must be taken in the College of Law of West Virginia University. When a student, because of admission with advanced standing from another law school, needs less than eighty-one hours in order to satisfy the requirements for this degree, the C average required for graduation is computed on the basis of work taken in the College of Law. No student may receive the degree of Bachelor of Laws without at least three semesters in residence at the College of Law and the successful completion of courses aggregating at least one-half of the total number of hours required for graduation.

GENERAL REGULATIONS

Written examinations are held at the end of each semester in all courses. Reports of students' grades are made at the end of each semester.

All courses extend either through the entire year or through one semester. No credit will be given for less than an entire course except by special order of the Committee on Scholarship. A grade given at the end of the first semester in a course extending throughout the year does not carry credit, but such first-semester grade may be considered in determining the final grade.

Final grades are based primarily on the written examinations. But in determining a grade the instructor may give such weight as he deems best to daily recitations or other classroom assignments. He may refuse examination to any student because of poor attendance.

No student who absents himself from any regular examination without being excused therefrom by the faculty of the College of Law will receive credit unless he successfully repeats the course. If absence from a final examination is permitted by the faculty, the student's grade in that course will be withheld until he has passed the next regular examination in the course. Application for leave to be absent from a regular examination must be made before the hour at which such examination closes.

To be graduated, a student must obtain an average grade of C, computed on the basis of all work taken during the first three years or on the basis of the first 81 hours, if the student has not taken the required 81 hours during the first three years.[2]

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[1]The C average requirement does not apply to students who entered before the fall of 1939. For rules governing such students see the Law School Bulletin for 1938-39.

[2]This rule does not apply to students who entered before September, 1939. For rules governing such students see the Law School Bulletin for 1938-39.

A student who at the end of the third or any subsequent semester has a grade of D or less in more than half his work, computed on the basis of the total number of hours which he has taken, shall be excluded permanently from the College of Law.[2]

A student who fails to pass more than half his work, computed on the basis of hours carried during any semester, shall be suspended. Upon application to the Scholarship Committee, a student so suspended, unless excluded under the preceding rule, may be readmitted, but with the understanding that if he again fails to pass half his work he shall be excluded permanently from the Law School.

Unless previously excluded on account of poor scholarship, a student who has received a grade of D in any course is privileged to take the next regular examination in that course for the purpose of raising his grade. No special examinations will be given under this rule.

Students in Other Colleges

Students of at least senior standing in other colleges of the University may be permitted to take work in the College of Law subject to the regulations of the colleges where they are registered and of the College of Law, but conditioned in each case upon the consent of the instructor giving the course which such students desire to take.

ADMISSION TO THE BAR

Under the provisions of the West Virginia Code 1931, ch. 30, art. 2, sec. 1, those who receive the degree of Bachelor of Laws from West Virginia University may be admitted to the bar without further examination.

All persons seeking admission to the West Virginia bar, except those who hold the degree of Bachelor of Laws from West Virginia University, are required to pass the state bar examination.

Information as to the bar examinations and as to other matters relating to admission to the bar may be obtained upon inquiry directed to the Secretary, State Board of Law Examiners, Charleston, West Virginia.

THE WEST VIRGINIA LAW QUARTERLY

The West Virginia Law Quarterly is published in December, February, April, and June by the College of Law. It is the official publication of the West Virginia Bar Association.

The editors of the Student Note and Recent Case Department of the Law Quarterly are members of the second- and third-year classes, chosen each year from those students who made the highest grades in the preceding year. This department affords to students an opportunity to do research work of a practical nature.

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The School of Medicine

INSTRUCTION IN MEDICINE

Regular instruction in subjects preparatory to the study of medicine was first given in West Virginia University in 1871, the chair of anatomy, physiology, and hygiene having been established in that year. A curriculum covering the first two years of a standard four-year medical course was provided in 1902, and the work was placed in charge of the College of Medicine with a resident faculty of six men. In 1912 the College of Medicine became the School of Medicine. In reorganizing the work in medicine the Board of Regents retained the general character of the curriculum previously offered but provided for a larger faculty, more laboratories, and more adequate equipment.

The School of Medicine is listed as a Recognized School of Basic Medical Sciences by the Council on Medical Education and Hospitals of the American Medical Association. It is also a member of the Association of American Medical Colleges.

Agreement With Medical College of Virginia

Only the first two years of medicine are given at West Virginia University. There has been made an agreement with the Medical College of Virginia at Richmond for the transfer of as many as twenty students, residents of West Virginia, who have completed the first two years at West Virginia University. At the Medical College of Virginia these students pay the same tuition as paid by the residents of Virginia. Upon graduation, diplomas are issued jointly by the two schools. Other students in the class may, as in the past, transfer to various medical schools for the completion of their work.

THE STANDING COMMITTEES

EXECUTIVE: E. J. VAN LIERE (*chairman*), G. S. DODDS, F. R. WHITTLESEY, and C. B. PRIDE.

ADMISSIONS AND SCHOLARSHIP: G. S. DODDS (*chairman*), S. B. CHANDLER, C. C. FENTON, P. L. MACLACHLAN, and C. K. SLEETH.

LIBRARY: S. B. CHANDLER (*chairman*), J. C. STICKNEY, P. L. MACLACHLAN, C. K. SLEETH, and J. M. SLACK.

RESEARCH: E. J. VAN LIERE (*chairman*), D. W. NORTHUP, D. F. MARSH, and P. L. MACLACHLAN.

SEMINARS: G. S. DODDS (*chairman*), J. C. STICKNEY, E. J. VAN LIERE, C. K. SLEETH, and J. M. SLACK.

CLINICAL AND SPECIAL FACILITIES: J. J. LAWLESS (*chairman*), C. B. PRIDE, C. C. FENTON, G. R. MAXWELL, F. R. WHITTLESEY, and C. K. SLEETH.

CURRICULUM: C. K. SLEETH (*chairman*), P. L. MACLACHLAN, E. J. VAN LIERE, D. F. MARSH, and G. S. DODDS.

STUDENT LOANS AND SCHOLARSHIPS: E. J. VAN LIERE (*chairman*), G. S. DODDS, P. L. MACLACHLAN, and J. C. STICKNEY.

The John Nathan Simpson Lectureship

In 1933 the West Virginia chapter of the Phi Beta Pi medical fraternity instituted the John Nathan Simpson Lectureship, honoring Dr. John N. Simpson, Dean Emeritus of the School of Medicine, giving an annual lecture by some one distinguished in medical research or practice.

REQUIREMENTS FOR DEGREES

The School of Medicine gives no degrees in medicine (except as noted on preceding page), inasmuch as only the first two years of medicine are given. It, however, cooperates with the College of Arts and Sciences in granting the Bachelor of Science degree, upon the completion of the two years of medical work, to those students who comply with certain requirements of the College of Arts and Sciences.

For a suggested curriculum for premedical students see page 124.

Curriculum in Medical Technology

The School of Medicine conducts a curriculum in Medical Technology leading to the degree of Bachelor of Science (Medical Technology). During the first two years students are registered in the College of Arts and Sciences; during the last two years in the School of Medicine. For further details see page 130.

THE SCHEDULE OF COURSES FOR 1947-48

	Hrs. per week			Hrs. per semester			Semester Hours' Credit
	Lect.	Lab.	Total	Lect.	Lab.	Total	
First Year — First Semester							
Gross Anatomy 201	2	8	10	32	128	160	6
Histology 211	3	9	12	48	144	192	6
Biochemistry 231	4	9	13	64	144	208	7
First Year — Second Semester							
Gross Anatomy 202	2	6	8	32	96	128	4
Neuro-Anatomy 203	2	6	8	32	96	128	4
Embryology 212	2	0	2	32	0	32	2
Medical Bacteriology 221	3	9	12	48	144	192	6
Physiology 242	2	3	5	32	48	80	3
Second Year — First Semester							
Physiology 243	5	6	11	80	96	176	7
Gen. and Tumor Pathology 251	5	9	14	80	144	224	7
Pharmacodynamics 262	3	0	3	48	0	48	3
Hygiene 222	2	0	2	32	0	32	2
Introductory Medicine 272	0	2	2	0	32	32	*
Psychobiology 273	1	0	1	16	0	16	1
Biostatistics 274	1	0	1	16	0	16	1
Physical Diagnosis 271	1	0	1	16	0	16	*

Second Year — Second Semester, First Half

Applied Anatomy 204	2	4	6	16	32	48	2**
Clinical Pathology 252	2	4	6	16	32	48	***
Special Pathology 254	1	2	3	8	16	24	***
Medical Pharmacology 263 ..	4	6	10	32	48	80	***
Obstetrics 291	2	0	2	16	0	16	***
History of Medicine 275	1	0	1	8	0	8	0
Physical Diagnosis 271	1	2	3	8	16	24	***
Introductory Medicine 272 ...	2	0	2	16	0	16	***
Surgery, Principles of 281 ...	2	0	2	16	0	16	***

Second Year — Second Semester, Second Half

Special Pathology 252	2	2	4	16	16	32	2
Clinical Pathology 254	3	7	10	24	56	80	3
Medical Pharmacology 263 ...	3	3	6	24	24	48	4
Clinical Anesthesiology 264 ..	1	0	1	8	0	8	0
Obstetrics 291	2	0	2	16	0	16	2
Physical Diagnosis 271	2	2	4	16	16	32	3
Introductory Medicine 272 ...	2	2	4	16	16	32	3
Surgery, Principles of 281	2	2	4	16	16	32	2

THE COURSES OF INSTRUCTION

NOTE—Courses marked "[1]" are required of first-year students; those marked "[2]" are required of second-year students.

In addition to the required courses there are listed some elective courses for the benefit of other University students who may need them. They are given only when, in the opinion of the department concerned and of the Dean, it is considered advisable. If there should arise a demand for any of these courses, the Medical School will try to meet the need, but the schedule will be contingent upon the extent to which staff members are occupied with the required medical courses.

Gross Anatomy and Neuro-anatomy

Professor CHANDLER; Associate Professor CLARK; Assistant Professor WILLIAMS, Assistant HESS

201.[1] Gross Anatomy. I. 6 Hrs. Lecture, 2 hours per week; laboratory, 8 hours.

202.[1] Gross Anatomy. II. 4 Hrs. Continuation of Anatomy 201. Lecture, 2 hours per week; laboratory, 6 hours.

203.[1] Neuro-anatomy. II. 4 Hrs. Lecture, 2 hours per week; laboratory, 6 hours.

204.[2] Applied Anatomy. II. 2 Hrs. Lecture, 2 hours per week; laboratory, 4 hours during first half of semester.

206. Anatomy of the Sympathetic Nervous System. I or II. 2-5 Hrs. Hours to be arranged. Open to properly qualified students.

207. Applied Anatomy of the Pelvis and Perineum. I or II. 2-5 Hrs. Hours to be arranged. Open to properly qualified students.

301. Advanced Anatomy. I or II. 2-5 Hrs. Hours to be arranged. Open to properly qualified students.

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*Course continues throughout the year.
**Course completed at mid-semester.
***Course continues throughout the semester.

Histology and Embryology

Professor DODDS; Assistant Professor WILLIAMS

211.[1] **Histology.** I. 6 Hrs. Histological structure and elementary embryology of tissues and organs. Lecture, 3 hours per week; laboratory, 9 hours.

212.[1] **Human Embryology.** II. 2 Hrs. Comprehensive survey of human development in relation to gross and microscopic structure. Lecture, 2 hours per week.

216. **The Histology and Development of the Skeletal System.** I or II. 2-5 Hrs. Hours to be arranged. Open to properly qualified students. Laboratory work and study of current literature.

217. **Advanced Embryology.** I or II. 2-5 Hrs. Topics to be chosen to meet special needs of students. Hours to be arranged. Open to properly qualified students.

311. **Research in Microscopic or Developmental Anatomy.** I or II or Yr. 2-5 Hrs. Hours to be arranged. Open to properly qualified students.

Bacteriology and Public Hygiene

Associate Professor SLACK; Assistant WILSON

220. **Pathogenic Bacteriology.** I. 5 Hrs. Required of students in pharmacy and medical technology. Open to other qualified students. Lecture, 2 hours per week; laboratory, 8 hours.

221.[1] **Medical Bacteriology.** II. 6 Hrs. Lecture, 3 hours per week; laboratory, 9 hours.

222.[2] **Public Hygiene.** I. 2 Hrs. Lecture, 2 hours per week.

226. **Advanced Bacteriology.** I or II. 2-5 Hrs. Hours to be arranged. Open to graduates and advanced students.

321. **Research in Bacteriology.** I or II. 2-5 Hrs. PR: Bacteriology 221 or equivalent.

Biochemistry

Professor MACLACHLAN; Assistants GOVER and MCGEE

139 or 239. **General Biochemistry.** II. 4 Hrs. Fundamental biochemistry of plants and animals with special reference to man. PR: Inorganic and organic chemistry. Quantitative analysis desirable. Lecture, 3 hours per week; laboratory, 5 hours. Graduate students required to do one hour additional work per week for 4 hours' credit.

231.[1] **Biochemistry.** I. 7 Hrs. Lecture, 4 hours per week; laboratory, 9 hours.

236. **Advanced Biochemistry.** I or II. 2-5 Hrs. With special emphasis on biochemical methods. Hours to be arranged. Open to properly qualified students.

331. **Research in Biochemistry.** I or II or Yr. 2-5 Hrs. Open to properly qualified students.

Physiology

Professor VAN LIERE; Associate Professor NORTHUP; Assistant Professor STICKNEY

141. **Elementary Physiology.** II. 4 Hrs. For students in Pharmacy and Medical Technology. Lecture, 3 hours per week; laboratory, 3 hours.

242.[1] **Physiology.** II. 3 Hrs. Physiology of muscle and nervous system. Lecture, 2 hours per week; laboratory, 3 hours.

243.[2] **Physiology.** I. 7 Hrs. Physiology of circulation, respiration, digestion, metabolism, secretion, endocrines, and special senses. Lecture, 5 hours per week; laboratory, 6 hours.

246. **Seminar in Physiology.** Yr. No credit.

247. **Advanced Physiology of Circulation and Respiration.** Yr. 2-5 Hrs. Hours to be arranged.

248. **Physiology of Gastro-intestinal System.** II. 2-5 Hrs. Hours to be arranged.

249. **Nervous Physiology and Special Senses.** Yr. 2-5 Hrs. Hours to be arranged.

341. **Physiology.** I or II. 2-5 Hrs. Research in Physiology leading to the master of science degree.

Pathology

Professor FENTON; Assistant Professor WADE; Instructor EDMISTON

151. **Clinical Laboratory Diagnostic Methods.** II. 4 Hrs. Study of blood, exudates, transudates, gastic contents, urine, etc. Lecture, 2 hours per week; laboratory, 6 hours. Required of students in Medical Technology.

251.[2] **General and Tumor Pathology.** I. 7 Hrs. Includes both gross and microscopic studies with demonstrations. Lecture, 4 hours per week; laboratory, 10 hours.

252.[2] **Special Pathology.** II. 2 Hrs. A study of special diseases with gross and microscopic specimens from selected autopsies. Lecture, 1 hour, laboratory, 2 hours per week during first half of semester; lecture, 2 hours per week; laboratory, 2 hours during second half of semester.

254.[2] **Clinical Pathology.** II. 3 Hrs. A laboratory course in blood, gastric contents, urine, etc., and their pathological and clinical significance. Lecture, 2 hours per week; laboratory, 4 hours during first half of semester; lecture, 3 hours per week; laboratory, 7 hours during second half of semester.

256. **Advanced Pathology.** I or II. 3 Hrs. Microscopic and gross specimens from selected autopsies. PR: Pathology 251.

351. **Experimental Pathology.** I or II. 2-5 Hrs. Hours to be arranged. Open to properly qualified students.

Pharmacology

Associate Professor MARSH; Instructor ROSS; Lecturers TUCKER and HAYMAN

262.[2] **Pharmacodynamics.** I. 3 Hrs. Lecture, 3 hours per week.

263.[2] **Medical Pharmacology.** II. 4 Hrs. Lecture, 4 hours per week, laboratory, 6 hours, first half of semester; lecture, 3 hours per week, laboratory, 3 hours, second half of semester.

264.[2] **Clinical Anesthesiology.** II. No credit. Practical demonstrations of anesthesia to be arranged. 1 hour per week, second half of semester.

266. **Biochemorphology.** II. 2 Hrs. Lecture, 2 hours per week. Relation between chemical constitution and physiological action of medical agents. PR: Pharmacology 262, or Chemistry 238 or 277.

267. **Bioassay and Comparative Pharmacology.** I or II. 3 Hrs. Lecture and demonstrations, 2 hours per week; laboratory, 3 hours. Cellular pharma-

codynamics and comparative mammalian pharmacology. PR: Pharmacology 262; or Chemistry 238 or 277 and Histology 211; or Pharmacy 110.

268. **Advanced Pharmacology.** I or II. 2-5 Hrs. Hours to be arranged. Rational investigation of new drugs.

269. **Anesthesiology.** II. 3 Hrs. Lecture, 2 hours per week; laboratory, 3 hours. PR: Physiology 242.

361. **Research in Pharmacology.** I or II. 2-5 Hrs. Hours to be arranged. PR: Graduate status in physiology, chemistry, or agriculture.

Medicine

Associate Professors Lawless and Sleeth; Assistant Professors Maxwell, Whittlesey, Salkin; Instructors Johnson, Starkey, Teitelbaum, and Gadzikowski

271.[2] **Physical Diagnosis.** Yr. 3 Hrs. Lecture, 1 hour per week during first semester; lecture, 1 hour per week, laboratory, 2 hours during first half of second semester; lecture, 2 hours per week, practical work with patients, 2 hours during second half of second semester. Hospital clerkship at Hopemont Sanitarium, 1 week.

272.[2] **Introductory Medicine.** Yr. 3 Hrs. Medical clinic—demonstration of clinical cases, 2 hours per week during first semester; lecture, 1 hour per week during first half of second semester; lecture, 2 hours, demonstration of clinical cases, 2 hours per week during second half of second semester. Hospital clerkship at Hopemont Sanitarium, 1 week.

273.[2] **Psychobiology.** I. 1 Hr. Introduction to the study of human personality, normal and abnormal. Lecture, 1 hour per week.

274.[2] **Biostatistics.** I. 1 Hr. Planned to aid in the understanding of the statistical methods commonly used in medical and biological work, and in the evaluation of experimental data in these fields. Lecture, 1 hour per week.

History of Medicine

Professor Chandler

275.[2] **History of Medicine.** II. No credit. A brief history of the development of the science and art of medicine. Lecture, 1 hour per week during first half of semester.

Introductory Surgery

Associate Professor Pride

281.[2] **Principles of Surgery.** II. 2 Hrs. Lecture, 2 hours per week during first half of semester; lecture, 2 hours per week during second half of semester, demonstrations of clinical cases and operative technique, 2 hours.

Obstetrics

Professor Van Liere

291.[2] **Obstetrics.** I. 2 Hrs. An introductory course in obstetrics. Lecture, 2 hours per week.

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The Division of Military Science and Tactics

Professor LUKERT; Assistant Professors HAWKINS, BLANEY, NORRIE, MARSHALL, EVANS, WHITE, and KOHNSTAMM

ELEMENTARY — FIRST YEAR

1. **Military Science 1.** 2 Hrs. 3 hours per week.
   World military situation, leadership drill and exercise of command, weapons and marksmanship, maps and aerial photographs, National Defense Act, and R. O. T. C.
2. **Military Science 2.** 2 Hrs. 3 hours per week.
   Continuation of subjects taught during first semester.

ELEMENTARY — SECOND YEAR

3. **Military Science 3.** 2 Hrs. 3 hours per week.
   World military situation, leadership, drill and exercise of command, physical development methods, maps and aerial photographs, military administration, evolutions of warfare, and military law.
4. **Military Science 4.** 2 Hrs. 3 hours per week.
   Continuation of subjects taught during first semester.

ADVANCED — FIRST YEAR

1. **Military Science 105.** Infantry, Engineers, Signal and Air. 3 Hrs. 5 hours per week.
   Military leadership, psychology, personnel management, exercise of command, military problems of the United States, occupied territories, military law and boards.
2. **Military Science 106.** Infantry, Engineers, Signal and Air. 3 Hrs. 5 hours per week.
   Tactics and technique of the elected arm or branch of service.
3. **Military Science 106** (Summer Camp). Infantry, Engineers, Signal and Air. No additional credit.
   Mandatory to qualify for ADVANCED — SECOND YEAR. Conducted at government expense from about second week in June to last week in August. 320 hours. Tactics and technique, practical.

ADVANCED — SECOND YEAR

4. **Military Science 107.** Infantry, Engineers, Signal and Air. 3 Hrs. 5 hours per week.
   Command and staff, military teaching methods, psychological warfare, geographical foundation of national power, leadership and exercise of command, combined and joint operations, military mobilization and demobilization.
5. **Military Science 108.** Infantry, Engineers, Signal. 3 Hrs. 5 hours per week.
   Tactics and technique of elected arm or branch of service.
   Air Corps: perconnel management and military administration.

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The School of Music

GENERAL INFORMATION

The School of Music of West Virginia University is an Associate Member of the National Association of Schools of Music. It was established in 1897 and is situated in two buildings. One contains two studios, three studio-classrooms, and six practice rooms; the other contains the office, two studios, ten practice rooms, one classroom, and the locker-room.

The equipment consists of 20 upright pianos and 13 grand pianos, an electric organ, a two-manual practice organ, and a three-manual pipe organ, modernized to conform to specifications of the American Guild of Organists. The pipe organ is situated in Reynolds Hall, and the others in the School of Music.

STUDENT CONCERTS

Students giving satisfactory performances appear in recital. The object is to afford opportunity for the students to apply in public the proficiency that has been developed in the studio.

All music students are required to attend the regular student recitals, to take part in them whenever so assigned, and to attend all concerts given under the auspices of the University. They are expected to identify themselves with the various organizations of the school and are required to enter any to which they are assigned by the Director.

Students of the School of Music are not allowed to take part in public programs or to join musical organizations without the consent of their respective instructors and the Director of the school.

FACULTY COMMITTEES

SCHOLARSHIP: Messrs. CUTHBERT and WOOD and Miss HINKEL.
CONCERTS AND RECITALS: Messrs. CUTHBERT, BRIGGS, WOOD and MCGREGOR.

REQUIREMENTS FOR THE DEGREE

The School of Music offers a four-year curriculum in voice, violin, piano, pipe-organ, theory and composition, and public-school music, leading to the degree of Bachelor of Music (B. Mus.).

The Bachelor of Music degree is conferred upon any student who complies with the general regulations of the University concerning degrees, satisfies all entrance and departmental requirements, and completes one of the following curricula in music (136 hours) with an average of one honor point per credit-hour:[1]

A. Piano, violin, pipe-organ, or voice
B. Theory and composition
C. Public-school music

[1]Honor points in excess of those earned for credit of 8 hours in Glee Club, Chorus, Orchestra, and Band will not be counted towards requirements for graduation.

Before graduation, all candidates for the degree Bachelor of Music must demonstrate the required proficiency in playing at sight piano accompaniments of moderate difficulty, and they must have performed in a minimum of four Student Recitals. In addition, all candidates for the degree Bachelor of Music in Public School Music must show proficiency in Voice and in one Band or Orchestral Instrument.

THE SUGGESTED CURRICULUM IN APPLIED MUSIC

Leading to the Degree of Bachelor of Music in

Piano, Violin, or Pipe Organ

FRESHMAN

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied Major	4	Applied Major	4
Applied Minor	2	Applied Minor	2
M. 1	4	M. 2	4
Glee, Cho., Bnd., or Orch.	1	Glee., Cho., Bnd., or Orch.	1
English 1	3	English 2	3
P. ed.[2]	1	P. ed.[2]	1
Fr., Ger., or Ital.	3	Fr., Ger., or Ital.	3
	—		—
(W)	18	(W)	18
Mil. sc. (men)[1]	2	Mil. sc. (men)[1]	2
	—		—
(M)	20	(M)	20

SOPHOMORE

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied Major	4	Applied Major	4
Applied Minor	2	Applied Minor	2
M. 3	4	M. 4	4
M. 79	2	M. 80	2
Glee, Cho., Bnd., or Orch.	1	Glee, Cho., Bnd., or Orch.	1
English	3	English	3
P. ed. (W)	1	P. ed. (W)	1
	—		—
(W)	17	(W)	17
Mil. sc. (men)[1]	2	Mil. sc. (men)[1]	2
	—		—
(M)	18	(M)	18

JUNIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied Major	4	Applied Major	4
Applied Minor	2	Applied Minor	2
M. 107	2	M. 108	2
M. 109	2	M. 110	2
M. 153	1	M. 154	1
Music elec.	2	Music elec.	2
Glee, Cho., Bnd., or Orch.	1	Glee, Cho., Bnd., or Orch.	1
Acad. elec.	3	Acad. elec.	3
	—		—
	17		17

SENIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied Major	4	Applied Major	4
Applied Minor	2	Applied Minor	2
M. 113	2	M. 114	2
M. 117	2	M. 118	2
M. 155	1	M. 156	1
M. 182 or 183	2	M. 199	2
M. 240	2	M. 241	2
M. 281	2		—
	—		15
	17		

[1]See footnote on next page.
[2]See footnote on next page.

THE SUGGESTED CURRICULUM IN APPLIED MUSIC

Leading to the Degree of Bachelor of Music in

Voice

FRESHMAN

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Voice	4	Voice	4
Piano	2	Piano	2
M. 1	4	M. 2	4
Glee or Cho.	1	Glee or Cho.	1
English 1	3	English 2	3
P. ed.[2]	1	P. ed.[2]	1
Fr., Ger., or Ital.	3	Fr., Ger., or Ital.	3
(W)	18	(W)	18
Mil. sc. (men)[1]	2	Mil. sc. (men)[1]	2
(M)	20	(M)	20

SOPHOMORE

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Voice	4	Voice	4
Piano	2	Piano	2
M. 3	4	M. 4	4
M. 79	2	M. 80	2
Glee or Cho.	1	Glee or Cho.	1
P. ed.[2] (W)	1	P. ed.[2] (W)	1
Fr., Ger., or Ital.	3	Fr., Ger., or Ital.	3
(W)	17	(W)	17
Mil. sc. (men)[1]	2	Mil. sc. (men)[1]	2
(M)	18	(M)	18

JUNIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Voice	4	Voice	4
Piano	2	Piano	2
M. 107	2	M. 108	2
M. 109	2	M. 110	2
M. 180	2	English	3
English	3	Acad. elec.	3
Acad. elec.	3	Glee or Cho.	1
Glee or Cho.	1		
	19		17

SENIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Voice	4	Voice	4
Piano	2	Piano	2
M. 113	2	M. 114	2
M. 117	2	M. 118	2
M. 182	2	M. 183	2
M. 240	2	M. 241	2
Glee or Cho.	1	M. 199	2
		Glee or Cho.	1
	15		17

[1]Military science is required of all male students except those who at the time of matriculation are 23 years of age or have completed no less than 58 hours of work and all who have credit for 4 hours of military science or 1 unit of entrance credit in military academy. Students must register for military science upon their entrance into the University and continue in the course until the full requirement has been met or until a regular exemption card is filed in the Registrar's office.

[2]Two hours of physical eduucation for men, to be taken during the first year of residence, and four hours of physical education for women, to be taken during the first and second years in residence, are required for graduation of students presenting fewer than 58 semester hours, unless previous credit has been allowed.

THE SUGGESTED CURRICULUM IN THEORY AND COMPOSITION

Leading to the Degree of Bachelor of Music in

Theory and Composition*

FRESHMAN

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 1	4	M. 2	4
M. 79	2	M. 80	2
Glee or Cho.	1	Glee or Cho.	1
Orchestra	1	Orchestra	1
English 1	3	English 2	3
P. ed.[2]	1	P. ed.[2]	1
	—		—
(W)	16	(W)	16
Mil. sc. (men)[1]	2	Mil. sc. (men)[1]	2
	—		—
(M)	18	(M)	18

SOPHOMORE

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 3	4	M. 4	4
M. 107	2	M. 108	2
Glee or Cho.	1	Glee or Cho.	1
Orchestra	1	Orchestra	1
English	3	English	3
Fr., Ger., or Ital.	3	Fr., Ger., or Ital.	3
P. ed. (W)[2]	1	P. ed. (W)[2]	1
	—		—
(W)	19	(W)	19
Mil. sc. (men)[1]	2	Mil. sc. (men)[1]	2
	—		—
(M)	20	(M)	20

JUNIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 109	2	M. 110	2
M. 113	2	M. 114	2
M. 117	2	M. 118	2
Glee or Cho. or Band or M. 153	1	Glee or Cho. or Band or M. 154	1
Orchestra	1	Orchestra	1
Acad. elec.	3	Fr., Ger., or Ital.	3
Fr., Ger., or Ital.	3	Inst. Class	1
Inst. Class	1		—
	—		16
	19		

SENIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 111	3	M. 112	3
M. 155	1	M. 156	1
M. 180	2	M. 198	2
M. 182	2	M. 183	2
M. 186	2	M. 187	2
M. 240	2	M. 241	2
Inst. Class	1	M. 281	2
	—		—
	17		18

*In order to be approved for candidacy in this field at the beginning of the Junior year, a student working towards the degree of Bachelor of Music in Theory and Composition must have maintained at least an average of B in all Theory courses required in the Freshman and Sophomore years, and he must have attained and demonstrated the required proficiency in Piano.

[1]Military science is required of all male students except those who at the time of matriculation are 23 years of age or have completed no less than 58 hours of work, and all who have credit for 4 hours of military science or 1 unit of entrance credit in military academy. Students must register for military science upon their entrance into the University and continue in the course until the full requirement has been met or until a regular exemption card is filed in the Registrar's office.

[2]Two hours of physical education for men, to be taken during the first year of residence, and four hours of physical education for women, to be taken during the first and second years in residence, are required for graduation of students presenting fewer than 58 semester hours, unless previous credit has been allowed.

THE SUGGESTED CURRICULUM IN PUBLIC-SCHOOL MUSIC

Leading to the Degree of Bachelor of Music in

Public-School Music*

FRESHMAN

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 1	4	M. 2	4
M. 79	2	M. 80	2
Glee, Orch., Bnd., or Cho.	1	Glee, Orch., Bnd., or Cho.	1
English	3	English	3
Sc. or math.	3	Sc. or math.	3
P. ed.[2]	1	P. ed.[2]	1
(W)	18	(W)	18
Mil. sc.[1]	2	Mil. sc.[1]	2
(M)	20	(M)	20

SOPHOMORE

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 3	4	M. 4	4
Glee, Orch., Bnd., or Cho.	1	Glee, Orch., Bnd., or Cho.	1
English	3	P. Sp.	3
Soc. studies	3	Soc. studies	3
Psychol. 1	3	P. ed.[2] (W)	1
P. ed[2] (W)	1	2nd Field	3
		Instr. Class	1
(W)	19	(W)	20
Mil. sc.[1]	2	Mil. sc.[1]	2
(M)	20	(M)	21

JUNIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 107	2	M. 108	2
Instr. Class	1	M. 182 or 183	2
Glee, Orch., Band, or Cho.	1	Instr. Class	1
Soc. studies	3	Glee, Orch., Band, or Cho.	1
2nd Field	2	Soc. studies	3
Ed. 106	3	2nd Field	5
Ed. 109	2	Ed. elec.	2
	18		20

SENIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 117	2	M. 118	2
M. 185	3	Instr. Class	1
Instr. Class	1	Glee, Orch., Band, or Cho.	1
Glee, Orch., Band, or Cho.	1	M. 241	2
M. 240	2	Ed. 120	2
2nd Field	3	Ed. 169	2
H. Ed.	2	Ed. 214	2
Ed. elec.	2	Ed. 224	3
	20		19

All students majoring in Public-school Music must meet the general academic and professional requirements for all high-school teachers as prescribed in State Bulletin for Certification of Teachers, in addition to the School of Music degree requirements.

Subject to the approval of the Director of the School of Music, Public-school Music may be chosen as a single teaching field, with training required in both Secondary and Elementary School Music.

Candidates for certification in music may be recommended for certification in one field with an upper limit of 68 hours in music and with no fewer than 48 hours distributed in subjects other than Education, approved by the Director of the School of Music.

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*See W. V. U. Bulletin on Teacher Certification for Second-field Requirements.

[1]Military science will not be accepted as physical education. Women may meet the four-hour physical education activity requirement by taking group 1 (Swimming), 2 (Dancing) 3 (Individual Sport), and 4 (Group Sport); men may meet it by taking P. E. 1, 2, and 180.

[2]Two hours of physical education for men, to be taken during the first year of residence, and four hours of physical education for women, to be taken during the first and second years in residence, are required for graduation of students presenting fewer than 58 semester hous, unless previous credit has been allowed.

THE COURSES OF INSTRUCTION

Theory of Music and General Courses*

Professor CUTHBERT; Associate Professors HINKEL, BRIGGS, and WOOD; Assistant Professors BROWN, ENGLISH, HOLLAND, and MCGREGOR; Instructors RHODES and ————; Instructors Emeritus MOORE and SNEE

1. **Theory.** I, II. 4 Hrs. PR: M. 72 or its equivalent. Staff
2. **Theory.** I, II. 4 Hrs. PR: Music 1. Staff
3. **Theory.** I, II. 4 Hrs. PR: Music 1 and 2. Staff
4. **Theory.** I, II. 4 Hrs. PR: Music 1, 2, and 3. Staff

   Music 1, 2, 3, and 4 constitute a composite course in musical theory, including fundamentals, sight reading, ear training and dictation, elementary and advanced harmony, keyboard harmony, and an approach to elementary counterpoint.

72. **Introduction to Music.** I, II. 0 or 2 Hrs. Fundamentals of reading, rhythm, and theory; terminology. This course or its equivalent is required for all entering freshman Music majors, without credit. Mr. McGregor
77. **Enjoyment of Music.** I, II. 1 Hr. A non-technical course dealing with the elements of music-rhythm, timbre, form, harmony, melody, etc. Not open to music majors. Mr. Wood
79. **Survey of Music Literature and History.** I. 2 Hrs. General survey of musical literature and history. Miss Hinkel
80. **Survey of Music Literature and History.** II. 2 Hrs. Continuation of Music 79. Miss Hinkel
107. **Form and Analysis.** I. 2 Hrs. A detailed study of the structure of music. Mr. Briggs
108. **Form and Analysis.** II. 2 Hrs. Continuation of Music 107. Mr. Briggs
109. **Introductory Counterpoint.** I. 2 Hrs. Strict two-part counterpoint in the five species. Mr. English
110. **Counterpoint.** II. 2 Hrs. Strict and free counterpoint in three and four parts. Mr. English
111. **Double Counterpoint and Canon.** I. 3 Hrs. Double counterpoint at the octave, tenth and twelfth; strict and free imitation. Staff
112. **Fugue.** II. 3 Hrs. Analysis and writing of classical fugue. PR: Music 111. Staff
113. **Introductory Composition.** I. 2 Hrs. PR: M. 4. Original creative writing in the smaller forms. Mr. English
114. **Composition.** II. 2 Hrs. PR: M. 113. Continuation of original writing. Mr. English
115. **Sight Playing.** I, II. 1 Hr. Study of the factors essential to the sight playing of varied piano compositions. Staff
116. **Sight Playing.** I, II. 1 Hr. Continuation of Music 115. Staff
117. **Orchestration.** I. 2 Hrs. PR: M. 4. Arrangements for string orchestra. Projects taken from choral and piano compositions. Elements of wood winds and brass. Mr. Wood
118. **Orchestration.** II. 2 Hrs. PR: M. 117. Arrangements for wood wind and brass separately and together with strings. Transcriptions of piano compositions. Mr. Wood
180. **Survey of Operatic Music.** I, II. 2 Hrs. Miss Hinkel
182. **Choral Conducting.** I, II. 2 Hrs. The conductor's art in the choral field, including practical experience in conducting choral groups. Miss Hinkel

*No additional fees charged for theory-of-music and general courses.

183. **Instrumental Conducting and Score Reading.** I, II. 2 Hrs. The conductor's art in the instrumental field, including score reading and practical experience in conducting instrumental groups. Mr. McGregor

185. **Public-school Music and Adolescent Voice.** I, II. 3 Hrs. Essentials of public-school music, including the study of changing voice. Miss Hinkel

186. **Composition.** I. 2 Hrs. Original writing of vocal music. PR: M. 113 and M. 114. Mr. English

187. **Composition.** II. 2 Hrs. Original writing of instrumental music. PR: M. 113 and M. 114. Mr. English

198. **Original major work in composition.** I, II. 2 Hrs. Required for degree in Theory and Composition. Staff

Men's Glee Club. I, II. 1 Hr. each semester. Mr. Cuthbert

Women's Glee Club. I, II. 1 Hr. each semester. Miss Hinkel

University and Community Orchestra. I, II. 1 Hr. each semester. Mr. Wood

University and Community Mixed Chorus. I, II. 1 Hr. each semester. Mr. Cuthbert

Band. I, II. 1 Hr. each semester. Open to male students who have satisfied the basic military requirement and have been approved by the director of the Band. Mr. McGregor

200s. **Band, Orchestra, and Chorus Clinic.** 2 Hrs. Special problems of organization and development, including literature, rehearsal technique, drilling, tuning, and motivation of student practice. Lecture and discussion groups. This clinic will function with laboratory groups of high-school students. Staff

240. **History of Music.** I. 2 Hrs. Survey of the progress of music history from medieval times to the end of the classical-school period. Mr. Wood

241. **History of Music.** II. 2 Hrs. Continuation of Music 240, including the romantic and modern schools. Mr. Wood

281. **Survey of Symphonic Music.** I, II. 2 Hrs. Miss Hinkel

Voice

Professor CUTHBERT; Assistant Professors MCGREGOR and HOLLAND; Instructor ————

The material used is selected according to individual needs. Vocalises; English, Italian, French, and German song literature; arias from standard operas and oratorios. Before graduation each student is required to give a public recital of selections chosen from the standard literature for the voice.

199. **Graduation Recital.** I, II. 2 Hrs. (Required for degree).

Piano

Associate Professor BRIGGS; Assistant Professor ENGLISH; Instructors RHODES and ————

The material used is selected according to individual needs. Technical studies, etudes, and standard compositions of Bach, Mozart, Haydn, Beethoven, Schubert, Schumann, Chopin, Liszt, Brahms, Debussy, Dohnanyi, Scriabine, etc. Before graduation each student is required to give a public recital.

199. **Graduation Recital.** I, II. 2 Hrs. (Required for degree).

Violin

Associate Professor WOOD

The material used is selected according to individual needs. Technical studies by Schradieck, Sevcik, etc. Solos and concertos by Wieniawski, Vieuxtemps, Sarasate, Viotti, Spohr, Mozart, etc. Before graduation each student literature for the violin, including concertos of Bruch, Mendelssohn, Conus, Paganini, etc.

199. Graduation Recital. I, II. 2 Hrs. (Required for degree.)

Pipe Organ

Assistant Professor ENGLISH

The material used is selected according to individual needs. Technique; standard works of Bach, Mendelssohn, Guilmant, Hollins, etc. Before graduation each student is required to give a public recital of compositions chosen from the standard literature for the pipe organ.

199. Graduation Recital. I, II. 2 Hrs. (Required for degree.)

Band and Orchestra Instruments

Associate Professor WOOD and Assistant Professor MCGREGOR

Individual lessons; standard methods; materials selected to meet individual needs.

199. Graduation Recital. I, II. 2 Hrs. (Required for degree.)

Ensemble

Professor CUTHBERT and Associate Professor WOOD

153, 154. Accompanying. I and II. 1 Hr. per semester. The course furnishes opportunity to acquire the art of accompanying songs and violin and cello solos.

155, 156. Chamber Music. I and II. 1 Hr. per semester. The study of sonatas, trios, and string quartettes of the most famous composers. Open to violinists, cellists, pianists, and viola players.

Instrument Classes[1]

Associate Professor WOOD and Assistant Professor MCGREGOR

191. Trombone. I, II. 1 Hr. Study of the trombone. Tone production, simple exercises and scales, easy pieces, positions of the slide trombone, and their relationship. Literature of brass instruments.

192. Cornet. I, II. 1 Hr. Study of the cornet. Tone production, simple exercises and scales, easy pieces, fingering of cornet. Literature of brass instruments.

193. Clarinet. I, II. 1 Hr. Study of the clarinet. Boehm system. Tone production, simple scales, and exercises.

194. Violin. I, II. 1 Hr. Study of the violin. Scales, simple pieces, exercises, positions, tuning, etc.

[1]Students may use their own instruments, or instruments may be rented for a fee of $2.50 per semester.

195. **Flute.** I, II. 1 Hr. Study of the flute. Boehm system. Tone production, simple scales, and exercises.
196. **Viola and Cello.** I, II. 1 Hr. Study of the viola and cello. Scales, simple pieces, exercises, positions, tuning, etc.
197. **Percussion.** I, II. 1 Hr. Study of percussion instruments.

Graduate Courses

Candidates for the Master's degree in Music are required to have completed the prescribed four-year curriculum of undergraduate study in Music, or to have completed such a curriculum, or its equivalent, at some institution of recognized standing.

General qualifying examinations are required of all candidates for the degree of Master of Music.

Each candidate for a degree must select his major subject in that department of Music in which his degree is to be taken, and submit a thesis showing marked attainment in some phase of this subject.

All Music courses leading toward the Master's degree in Music must be chosen from the 300 series in Music. However, elective courses may be chosen from the 200 or 300 series.

The requirements for the degree Master of Music in Public-school Music constitute 20 hours in Music and 10 hours elective in Education or Arts and Science subjects. The Music courses include 301(2), 302(2), 305(3), 306(3), 309(3), 313(3), and 399(4). Credit for work in Band and Orchestra Instruments will be accepted towards the Advanced Applied Music requirements.

The requirements for the degree Master of Music in Applied Music constitute 20 hours in Music and 10 hours elective in Arts and Science subjects. The Music courses include 301 (4), 302 (4), 307 (3) or 313 (3), 308 (3), 309 (3), and 399 (3). Credit in Advanced Applied Music must be earned in Piano, Voice, Violin, or Pipe Organ.

301. **Advanced Applied Music.** I. 2 or 4 Hrs. Continuation of study in Applied Music (voice, piano, violin, pipe organ, band and orchestra instruments), including public performance of advanced compositions. Staff
302. **Advanced Applied Music.** II. 2 or 4 Hrs. Continuation of Music 301. Staff
305. **Advanced Public-school Music.** I. 3 Hrs. Survey and critical study of the vocal and instrumental repertoire of Public-school Music, with discussions of essentials in its performance. Miss Hinkel
306. **Advanced Public-school Music.** II. 3 Hrs. Continuation of Music 305. Comprehensive study, evaluation, and interpretation of musical masterpieces suitable for use in Public-school Music, including all of the principal types. Miss Hinkel
307. **Advanced Composition.** I, II. 3 Hrs. Composition in larger forms. Mr. English
308. **Music Literature.** I, II. 3 Hrs. Survey and critical study of music literature in the major field of Applied Music. Staff
309. **Advanced Conducting.** I. 3 Hrs. Study and practice in the conducting of advanced choral and instrumental works, including advanced score-reading. Mr. Wood
313. **Advanced Orchestration.** II. 3 Hrs. A study in advanced technique of orchestral arranging, including arranging of Bach's and Beethoven's solo instrumental works. Mr. Wood
399. **Thesis.** I, II. 2 to 4 Hrs. Including research in the Major or related field of music. Staff

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The College of Pharmacy

ORGANIZATION AND OBJECTIVES

In response to the request of the West Virginia State Pharmaceutical Association, a forward-looking group of pharmacists practicing in the state who recognized the necessity for more thoroughly educated and better-trained pharmacists, the Board of Regents in 1914 established a Department of Pharmacy in the School of Medicine. The first course offered was a two-year course leading to the degree of Graduate in Pharmacy (Ph. G.).

In 1917 additional courses of three and four years, leading to the degrees of Pharmaceutical Chemist (Ph. C.) and Bachelor of Science in Pharmacy (B. S. Phar.), were established. The course leading to the degree of Graduate in Pharmacy was discontinued in 1924, and the course leading to the degree of Pharmaceutical Chemist was discontinued in 1932. Since 1932, a minimum of four years of study has been required.

The College of Pharmacy was established as a separate division of the University, by order of the Board of Governors, effective July 1, 1936.

The chief purpose of the College of Pharmacy is to provide a systematic instruction in pharmacy, its allied sciences, and such other subjects as are deemed to be essential in the education of a pharmacist, that he may meet the present and future demands of the profession in an able and intelligent manner. Its chief aim is to prepare its students for the intelligent practice of dispensing pharmacy, but it offers the facilities and instruction necessary for the practice of other branches of the profession.

Graduates of the College of Pharmacy are eligible for examination to practice pharmacy in any state, but graduates of this College who successfully pass the West Virginia State Board of Pharmacy examination are privileged to reciprocate with forty-five other states and with the District of Columbia, Alaska, and Porto Rico, without further examination, provided they possessed the experience requirement of these states before taking the examination.

REQUIREMENTS FOR THE DEGREE

The degree of Bachelor of Science in Pharmacy (B. S. Phar.) is conferred upon any student who complies with the general regulations of the University concerning degrees, satisfies all entrance and college requirements, and completes the basic two-year course, together with one of the following curricula providing for specialized training during the third and fourth years:

A. Retail Pharmacy (142 hours)

B. Industrial Pharmacy (145 hours)

The curriculum for the first two years is the same for all students. At the beginning of the third year the student is expected to select a field of specialization and pursue for the remaining two years the courses outlined in that group.

Students who fail to complete the requirements for graduation within seven years from their first registration in the College shall satisfy the requirements in effect at the time they apply for graduation.

Substitutions. A student who desires to substitute another course in place of any course prescribed in his curriculum must obtain permission for such substitution from the Committee on Scholarship.

BASIC COURSES REQUIRED FOR THE DEGREE*

First Year

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Botany 1	4	Botany 2	4
Chem. 1	4	Chem. 2	4
Military 1	2	English 2	3
English 1	3	Military 2	2
Pharm. 1	3	Pharm. 3	2
Pharm. 2	2	Pharm. 10	3
Phys. Ed. 1	1	Phys. Ed. 1	1
	19		19

Second Year

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Chem. 5	4	Chem. 6	4
Econ. 1	3	Econ. 2	3
Military 3	2	Military 4	2
Pharm. 5	3	Pharm. 6	4
Pharm. 4	2	Pharm. 7	2
Pharm. 11	3	Pharm. 12	3
Pharm. 9	2		
	19		18

Retail Pharmacy‡

Third Year

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Chem. 233	5	Chem. 238	4
Physics 1	3	Pharm. 8	2
Physics 3	1	Pharm. 107	2
Pharm. 103	2	Pharm. 114	2
Pharm. 106	2	Physics 2	3
Pharm. 101	1	Physics 4	1
Pharm. 102	1	Physiol. 141	4
	15		18

Fourth Year

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Bacter. 220	5	Pharm. 109	2
Pharm. 108	3	Pharm. 113	5
Pharm. 110	3	Pharm. 118	1
Pharm. 201	3	Pharm. 202	2
Pharm. 203	2		
Pharm. 205	2		
	18		10

Industrial Pharmacy†

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Chem. 163	3	Chem. 238	4
Chem. 233	5	Pharm. 8	2
Pharm. 103	2	Pharm. 104	2
Pharm. 106	2	Pharm. 107	2
Pharm. 205	2	Physics 2	3
Physics 1	3	Physics 4	1
Physics 3	1	Physiol. 141	4
	18		18

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Bacter. 220	5	Biochem. 239	4
Pharm. 108	3	Pharm. 109	2
Pharm. 110	3	Pharm. 113	5
Pharm. 201	3	Pharm. 118	1
Pharm. 203	2	Pharm. 202	2
	16		14

COMBINED PHARMACY AND MEDICAL TECHNOLOGY

Leading to the Degree of Bachelor of Science in Pharmacy in the College of Pharmacy and to the Degree of Bachelor of Science (Medical Technology) in the College of Arts and Sciences and in the School of Medicine.

The Bachelor of Science in Pharmacy degree in the College of Pharmacy and the Bachelor of Science (Medical Technology) degree in the College of

*Upon entering, those who plan to follow the Pharmacy—Medical course or the Pharmacy—Medical Technician course should elect zoology instead of botany during the first year. Psychology, 3 hours, a modern foreign language, 12 hours, and comparative anatomy are required for the Pharmacy—Medical course.

‡Additional approved elective courses to make a total of 142 hours are required for graduation.

†Additional approved elective courses to make a total of 145 hours are required for graduation.

Arts and Sciences and in the School of Medicine are conferred upon any student who complies with the general regulations of the University concerning degrees, satisfies all entrance and college requirements, and the first two years of the basic two-year course outlined on page 261, and the three-year curriculum outlined below. The degree of Bachelor of Science in Pharmacy to be awarded upon completion of the first four years of the curriculum, and the degree of Bachelor of Science (Medical Technology) to be awarded upon completion of the curriculum of the fifth year.

Students completing the basic two-year curriculum and desiring to pursue the following curriculum must make application and secure the approval of the appropriate committee of the School of Medicine.

Third Year

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Zoology 231	5	Chemistry 238	4
Chemistry 233	5	Parasitology 120	4
Pharmacy 103	2	Pharmacy 8	2
Pharmacy 106	2	Pharmacy 107	2
Physics 1	3	Physics 2	3
Physics 3	1	Physics 4	1
		Physiology 141	4
	18		20

Fourth Year

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Pharmacy 108	3	Biochemistry 239	4
Pharmacy 110	3	Pharmacy 109	2
Pharmacy 201	3	Pharmacy 113	5
Pharmacy 203	2	Pharmacy 118	1
Pharmacy 205	2	Pharmacy 202	2
Bacteriology 220	5	Pathology 101	4
	18		18

Fifth Year*

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
M.T. Urine analysis	5	Hospital Assignment	5
M.T. Normal hematology	4	M.T. Applied bacteriology	4
M.T. Microtechnique	3	M.T. Special hematology	3
M.T. Applied serology	4	M.T. Metabolimetry	3
M.T. Applied parasitology	1	M.T. Electrocardiography	2
	17		17

COMBINED PHARMACY AND MEDICAL COURSES

Leading to the Degree of Bachelor of Science in Pharmacy in the College of Pharmacy and to the Degree of Bachelor of Science in the College of Arts and Sciences and in the School of Medicine

The Bachelor of Science degree in the College of Arts and Sciences and in the School of Medicine and the Bachelor of Science in Pharmacy degree in the College of Pharmacy are conferred upon any student who complies with the general regulations of the University concerning degrees, satisfies all entrance and college requirements, and the first year of the basic two-year

*Owing to the nature of the work in the fifth year, there will probably be departures from the scheduled sequence of courses.

course outlined on page 261, and the four-year curriculum outlined below, the last two years of which are taken in the School of Medicine.

Second Year				Third Year			
First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Sec. Sem.*	*Hrs.*
Chem. 5	4	Chem. 6	4	Chem. 163	3	Chem. 36	6
Fr. or Ger.	3	Fr. or Ger.	3	Fr. or Ger.	3	Fr. or Ger.	3
Military 3	2	Military 4	2	Pharm. 106	2	Pharm. 107	2
Pharm. 4	2	Pharm. 6	4	Physics 1	3	Psychol. 101	3
Pharm. 5	3	Pharm. 7	2	Physics 3	1	Physics 2	3
Pharm. 9	2	Pharm. 12	3	Pharm. 108	3	Physics 4	1
Pharm. 11	3			Zool. 231	5		
	19		18		20		18

The fourth and fifth years to be completed as per curriculum of the first two years in the School of Medicine. In view of the fact that the enrollment of the School of Medicine is limited, application for entrance must be made in accordance with the regulations of the School of Medicine.

SUGGESTED ELECTIVE COURSES

First Semester

Subject	*Hrs.*
Biol. 1—Biology	4
Bot. 221—Plant Physiol.	4
Bus. Ad. 121—Elements of Marketing	3
Bus. Ad. 141—Business Law	3
Chem. 111—Synthetic Inorganic Chemistry	4
Chem. 214—Organic Qual. Anal.	3
Chem. 251—Industrial Inorganic Chemistry	3
Chem. 63 or 163—Physical Chemistry	3
Chem. 247—Stereochemistry	2
Chem. 141—Assigned Topics	1 to 5
Chem. 277—Synthetic Drugs	2
Chem. 343—Advanced Organic Chemistry	4
Econ. 111—Money and Banking	3
French 1—(When not offered for entrance credit)	3
Geol. 1—General Geology	3
Geol. 284—Mineralogy	4
German 1—(When not offered for entrance credit)	3
German 121—Scientific German	3
Journal. 113—Prin. of Advertising	3
Math. 3—College Algebra	4
Math. 4—Plane Trigonometry	2
Pharm. 115—Microscopy	2 to 3
Pharm. 116—Pharmaceutical Investigation	2 to 3
Physics 109—Problems in General Physics	2
Speech 11—Public Speaking	3
Sociol. 101—Intro. to Sociol.	3
Zool. 3—General Zoology	4

Second Semester

Subject	*Hrs.*
Zool. 231—Comparative Anat.	5
Bus. Ad.127—Salesmanship	2
Bus. Ad. 122—Marketing of Manufactured Goods.	3
Chem. 252—Indust. Org. Chem.	3
Chem. 162—Colloidal Chem.	4
Chem. 274—History of Chem.	2
Chem. 142—Assigned Topics	1 to 5
Chem. 214—Organic Qual. Anal.	3
Chem. 277—Synthetic Drugs.	2
Ch. Eng. 102—Blow-Pipe Anal. and Assaying	2
Ch. Eng 201—Unit Organic Processes	3
Ch. Eng. 202—Water Exam. and Purification	2
Econ. 114—Corporation Finance	3
French 2—(When not offered for entrance credit)	3
Geol. 1—General Geology	3
German 2—(When not offered for entrance credit)	3
German 122—Scientific German	3
Math. 3—College Algebra	4
Math. 4—Plane Trigonometry	2
Pharm. 115—Microscopy	2 to 3
Pharm. 116—Pharmaceutical Investigations	2 to 3
Physics 110—Problems in General Physics	2
Physics 116—Photography	3
Speech 11—Public Speaking	3
Zool. 2—Vertebrate Zool.	4
Psychol. 1—Intro. to Psychol.	3
Psychol. 10—Applied Psychol.	3

THE COURSES OF INSTRUCTION

(For explanation of abbreviations see page 88)

Professors HAYMAN and BERGY; Associate Professor GEILER; Instructor WOJCIK

1. **Theoretical Pharmacy.** I. 3 Hrs. Descriptive and experimental lectures and recitations, embracing a study of the apparatus and technique necessary for the correct procedure in the manufacture of pharmaceutical preparations (86 hrs.). Lectures and recitations. Mr. Geiler
2. **Pharmaceutical Arithmetic and Stoichiometry.** I. 2 Hrs. Lectures and recitations (36 hours). Mr. Wojcik
3. **Pharmaceutical Arithmetic.** II. 2 Hrs. Continuation of Pharmacy 2. Lectures and recitations (36 hours). Mr. Wojcik
4. **Operative Pharmacy Lectures.** I. 2 Hrs. A systematic consideration of the various official preparations for which the Pharmacopoeia and National Formulary give formulas and processes. Lectures and recitations (36 hours). Mr. Geiler
5. **Operative Pharmacy Laboratory.** I. 3 Hrs. This course is carried in conjunction with Pharmacy 4. The representative classes of preparations of the Pharmacopoeia and National Formulary are manufactured. (100 hours). Mr. Geiler
6. **The Art of Compounding.** II. 4 Hrs. The more difficult pharmaceuticals and miscellaneous preparations are considered in connection with the modern methods of compounding. Lectures and recitations (72 hours). Mr. Bergy
7. **Art of Compounding Laboratory.** II. 2 Hrs. A laboratory course in conjunction with Pharmacy 6. Laboratory (100 hours). PR: Pharmacy 4 and 5. Mr. Bergy
8. **Pharmaceutical Jurisprudence.** II. 2 Hrs. An intensive study of the Harrison Narcotic Law, the West Virginia Pharmacy Law, and other state and national laws pertaining to pharmacy. Lectures and recitations (36 hours). Mr. Hayman
9. **Pharmaceutical Latin.** I. 2 Hrs. Pronunciation, declension, English and Latin translations, comparisons, abbreviations and vocabularies of medicine and pharmacy. Lectures and recitations (36 hours). Mr. Wojcik
10. **Vegetable Histology.** II. 3 Hrs. The microscopical characteristics of starches, powdered vegetable drugs, and their adulterants. Lectures and recitations (18 hours), laboratory (100 hours). Mr. Geiler
11. **Pharmacognosy.** I. 3 Hrs. An intensive study of vegetable and animal drugs, their collection, preparation, constituents, and applicability. Lectures and recitations (54 hours). Mr. Hayman
12. **Pharmacognosy.** II. 3 Hrs. A continuation of Pharmacy 11. Lectures and recitations (54 hours). Mr. Hayman

101. **Commercial Design.** I. 1 Hr. Practical water-color lettering emphasizing arrangement and color harmony, for show cards and store windows. Laboratory (50 hours). Mr. Hayman
102. **Accounting.** I. 1 Hr. Laboratory (50 hours). Mr. Hayman

103. **Hygiene.** I. 2 Hrs. Lectures and recitations (36 hours). Mr. Bergy

104. **Qualitative Analysis of the Alkaloids and Synthetics.** II. 2 Hrs. Laboratory (100 hours). Mr. Bergy

106. **Pharmaceutical Chemistry.** I. 2 Hrs. Deals specifically with inorganic chemistry as applied to pharmacy. Lectures and recitations (36 hours). Mr. Bergy

107. **Pharmaceutical Chemistry.** II. 2 Hrs. A continuation of Pharmacy 106. Special attention to the chemistry and adaptability of germicides fungicides, paraciticides, rodenticides, etc. (36 hours). Mr. Bergy

108. **Prescriptions and Incompatibilities.** I. 3 Hrs. The prescription is studied relative to the interpretation of the chemical, pharmaceutical, and therapeutical incompatibilities, posology, art of dispensing, and Latin nomenclature. Lectures and recitations (54 hours). Mr. Hayman

109. **Prescription Practice.** II. 2 Hrs. A laboratory course embracing prescription filling and dispensing. Laboratory (100 hours). Mr. Hayman

110. **Assay and Pharmaceutical Testing.** I. 3 Hrs. A critical study of U. S. P. & N. F. methods of assays. Lecture (18 hours), laboratory (100 hours). Mr. Geiler

113. **U. S. P. and N. F.** II. 5 Hrs. A comprehensive study of the United States Pharmacopoeia and the National Formulary, including review on related subjects. Recitations (90 hours). Mr. Hayman

114. **Commercial Pharmacy.** II. 2 Hrs. The establishment, management, and development of a modern pharmacy, with special emphasis on business economics, accounting, correspondence, salesmanship, and advertising. Lectures and recitations (36 hours). Mr. Geiler

115. **Advanced Microscopy.** I or II. 2 to 3 Hrs. A laboratory course concerned with the microscopy of vegetable foods and technical products, quantitative microscopic methods, and micrometry. Permission of instructor must be obtained before electing. Laboratory (100 to 150 hours). Mr. Hayman

116. **Pharmaceutical Investigation.** I or II. 2 or 3 Hrs. Original investigation in pharmacy or pharmaceutical chemistry. Laboratory and collateral reading. (100 to 150 hours). Mr. Hayman and Staff

117. **Dispensing.** I or II. 1 or 2 Hrs. A practical course in University Pharmacy under the supervision of a registered pharmacist in compounding, pricing, and filing prescriptions. Laboratory (50 to 100 hours). Mr. Hayman and Staff

118. **New and Nonofficial Remedies.** II. 1 Hr. A critical study of the most recent pharmaceutical introductions as approved by the Council of Pharmacy of the American Medical Association. Lectures and recitations (18 hours). Mr. Bergy

120. **Cosmetics.** I. 1 or 2 Hrs. A laboratory course devoted to compounding a large number of preparations of this type, including perfumes (50 or 100 hours). Mr. Bergy

121. **Household Products.** II. 1 or 2 Hrs. Laboratory (100 hours). Mr. Bergy

201. **Pharmacology.** II. 3 Hrs. A general survey of the pharmacological, antidotal, and therapeutic action of the more potent drugs which the pharmacist is called upon to dispense. Lectures and recitations (54 hours). Mr. Bergy

202. Pharmacology. II. 2 Hrs. A continuation of Pharmacy 201. Lectures and recitations (36 hours). Mr. Bergy

203. Biological and Chemical Therapy. I. 2 Hrs. A thorough study of hormones, vitamins, glandular products, the newer chemical medicinals, and the methods of preparation and standardization of biologicals. (36 hours). Mr. Bergy

205. History of Pharmacy. I. 2 Hrs. Mr. Bergy

The School of Physical Education and Athletics

ORGANIZATION

For purposes of administration and instruction the School of Physical Education and Athletics is organized into the following departments:

I. Service program for men.

II. Service program for women.

III. Curriculum for majors and graduate students preparing for positions in health and physical education, athletic coaching, and recreation.

IV. Intramural Sports.

The various departments of the school serve the students of all departments of the University by providing a systematic program of physical education and recreation.

The department of curriculum for majors provides professional training for all men and women who are desirous of becoming teachers of physical education and coaches in high schools and colleges, or directors of public recreation. Those who complete the course will also have satisfied the prerequisites for entrance into departments in universities giving training in physical therapy. Anyone completing the course of study outlined by the school and authorized by the University and receiving an honor-point average of one honor point for each credit hour taken in the University qualifies for the degree of Bachelor of Science in Physical Education (B.S.P.E.). Courses are also offered in health and physical education at the graduate level leading to the Master of Science degree. The bulletins and announcements of the Graduate Council should be referred to for further details of the residence and course requirements.

THE STANDING COMMITTEES

SCHOLARSHIP: MISS HURST; MESSRS. SEMON and TORK.

GRADUATE: MISS GRIFFIN (Chairman); MESSRS. ROMNEY and YOST.

INTRAMURAL SPORTS: MESSRS. ROMNEY, SEMON (chairman), TORK, and senior managers.

PLACEMENT AND RECOMMENDATION: MISS GRIFFIN; MESSRS. EICHER and TORK.

ATHLETIC COUNCIL: G. O. ROMNEY (chairman), C. L. COLSON, H. M. FRIDLEY, J. O. KNAPP, faculty members; G. W. JACKSON and I. L. VANVOORHIS, Alumni members; R. G. GENTRY, student member; and WM. G. THOMPSON, Board of Governors, ex officio.

REQUIREMENTS FOR THE DEGREE

The Degree of Bachelor of Science in Physical Education may be conferred upon any student who satisfies the entrance requirements and offers 128 hours[2] with grade of D or above, and an average grade of C.

Required and Elective Subjects

Of the 128 hours which are required for the degree of Bachelor of Science in Physical Education, at least 40 hours are required in the School of Physical Education and Athletics. The remaining hours must be selected from such courses as may be approved by the adviser. A candidate for a degree is required to make a selection of one of the teaching combinations on page 268 and to complete the number of semester hours required in each teaching group.

The courses are arranged to meet the University requirements for the degree of Bachelor of Science in Physical Education as well as the state requirements for certification. The curriculum for the four-year course has been so arranged that consideration is given to the various activities which should constitute a well-rounded program of physical education for boys and girls of high-school age. These courses are arranged in eleven groups as follows:

A. Required courses in physical education which include the theory and practice of physical education courses for men and women are: Physical Education 11, 12, 13, 14, 43, 44, 45, 46, 111, 112, 113, 114, 127, 141, 142, 143, 144, and 156 for men; and Physical Education 15, 16, 25, 26, 27, 28, 57, 58, 59, 60, 125, 126, 127, 128, 151, 157, 158, 159, and 160 for women. These courses are known as the Physical Education block.
B. Required theory courses in physical education are: Physical Education 71, 74, 77, 150, 166, 167, 175, and 277.
C. Required courses in recreation which include both theory and practice in recreation for men and women are: Recreation 1, 2, 3, and 101.
D. Required courses in health education, namely, Health Education 2, 101.
E. A required course in safety education, namely, Safety Education 181.
F. Required courses in English and speech.
G. Required courses in science which furnish a background for physical education.
H. Required courses in education which consider the principles of general education.
I. Required courses in social studies.
J. Required courses in military science for men of the University.
K. Elective courses which are taken at the pleasure of the student.

It is understood that a sound and vigorous body is essential to all students who elect this curriculum. Each student must, therefore, pass a thorough physical examination before he will be allowed to enroll in this program. Special emphasis is placed upon the personal and professional qualifications of the student as well as upon a high standard of scholarship.

Student teaching of high-school classes in physical education, as well as practice coaching of high-school athletic teams is available in the University Rural High School. Student assistance in college classes in physical education is required in connection with the service programs for both men and women.

[2]Students may decrease the number of hours required for graduation by doing work of superior quality. For details see page 57.

Additional practice opportunities are frequently available in the Monongalia County Schools.

Recommendation for Certification

The prospective teacher who intends to apply for certification for school service in the state should take care to satisfy the requirements for other teaching subjects and the required courses in education and physical education.

The Certification Requirements

For a statement of the conditions governing the preparation of high-school teachers and their recommendation to the State Board for certification, see the special Bulletin, **Requirements Applicable to Degrees and to Teacher Certification.**

The General Physical Education Requirements for Certification

All students who plan to be certificated to teach must meet the University requirements of a minimum of four (4) hours (men) and six (6) hours (women) of Health and Physical Education. The specific courses offered to meet this requirement are as follows: FOR MEN (except majors in physical education): Physical Education 1* (1) 2* (1) Health Education 180 (2). Total, 4 hrs. FOR WOMEN (except majors in physical education): One course in each of the following groups: Athletics 9 or 10; Dancing 2, 3, 4, 5, or 15; Individual Activity 6, 7, 8, 17, or 57; Swimming 1 or 16; Health Education 180. Total 6 hrs.

Suggested Teaching Combinations for First-Class High-School Certificates

1. Physical education and biological science.
2. Physical education and mathematics.
3. Physical education and social studies.
4. Physical education and English.
5. Physical education and physical and general science.
6. Physical education and physical science.
7. Physical education and biological and general science.
8. Other combinations approved by the adviser.

THE GENERAL AND SPECIALIZED CURRICULA

A General Curriculum looking toward broad, general preparation in the fields of health and physical education, athletic coaching, and public recreation and providing teacher certification and graduation with a degree of Bachelor of Science in Physical Education is offered by the School of Physical Education and Athletics.

Plans have been approved also for the development of three Specialized Curricula looking toward additional and more detailed training in either health education, athletic coaching, or public recreation. Students generally will take, in their first two years, background work in science and the general

*This requirement should be met by the men in their first year of residence and by the women in their first two years of residence.

liberal arts subjects. In the Junior year opportunity is offered to continue the general curriculum, which provides broad training in health and physical education, athletic coaching, and recreation, or to elect one of the three specializing curricula, which will enable the student to devote more time to the chosen field of either health education, athletic coaching, or recreation.

THE SERVICE PROGRAM FOR MEN

Associate Professor Tork; Assistant Professors Rodgers, Smith, and Semon; Instructors Eicher, Patton, and Howell

The courses offered in this department are designed to meet the needs of the men of the University for an organized program of instruction and recreation during their period of residence. The purposes of the department are to develop recreational skills which can be enjoyed while in college and invested in leisure time after college, to establish habits of regular participation, and to develop favorable attitudes toward wholesome play.

Students completing Physical Education 1 and 2 meet the University requirements of two hours' credit in physical education as a prerequisite for graduation of all students subject to this requirement.

During Freshmen Week all freshmen will report to the Health Service for physical and medical examination. These examinations are the guide in the selection of a program of physical education for the individual student.

Courses

1. **Service Program for Men.** I. 1 Hr. Required of all freshmen men in the University (except majors in physical education).
   Students who are found to be physically unable to engage in regular activity will be assigned to the **restricted group** for a restricted program of physical education recommended by the University physician and under the direction of the Staff of the department.
   Students who wish to substitute Varsity athletics for Physical Education 1 or 2 may do so by obtaining permission from both the coach of the respective sport and the director of the service program. Members of this athletics-for-credit group are required to take all tests and examinations given to the regular group. Credit in Physical Education 1 and 2 earned by participation in the athletics-for-credit group will not be accepted by the State Department of Education for certification.
   All other students will be assigned to the **regular group** for the regular program of physical education under the direction of the Staff. These students will be organized into groups for instruction and organized competition in the following activities:
   Calisthenics, running, obstacles, apparatus, tumbling and medicine ball, touch football, badminton, relays, basketball, boxing, wrestling.
   Mr. Tork and Staff

2. **Service Program for Men.** II. 1 Hr. Continuation of course I. Required of all freshmen men in the University (except majors in physical education).
   Students in the regular group will be organized into groups for organized competition in the following activities:
   Calisthenics, running, obstacles, apparatus, tumbling and medicine ball, basketball, group games, handball, track and field relays, bag striking, softball, and baseball. Mr. Tork and Staff

THE SERVICE PROGRAM FOR WOMEN

Professor GRIFFIN; Assistant Professors ERLANGER and HURST; Instructors THORN and WHITE

The courses offered in this department are designed to meet the needs of the women of the University for an organized program of instruction and recreation during their period of residence. Four semester hours of three periods each week are required for graduation of all women students unless they enter with 58 hours of advanced credit. The offerings include both indoor and outdoor activities.

Each woman student subject to the foregoing requirements is required to pass a minimum test in swimming, play skillfully one highly organized sport and one individual sport, meet a definite standard of rhythm, and gain a knowledge of hygiene in relation to wholesome living.

The four semesters of work should be selected from the following four groups:

Group 1—Physical Education 1 or 16	(Swimming)
Group 2—Physical Education 2, 3, 4, 5, or 15	(Dancing)
Group 3—Physical Education 6, 7, 8, 17, or 57	(Individual Sport)
Group 4—Physical Education 9 or 10	(Group Sport)

Courses

These courses need not be taken in sequence.

1. **Swimming, Diving, and Life Saving.** I, II. 1 Hr. Staff
2. **Elementary Modern Dancing.** I, II. 1 Hr. Staff
3. **Folk Dancing.** I, II. 1 Hr. Staff
4. **Tap Dancing.** II. 1 Hr. Staff
5. **Social Dancing.** I. 1 Hr. (Limited to beginners.) Staff
6. **Stunts, Tumbling, and Pyramid Building.** I, II. 1 Hr. Staff
7. **Archery.** I, II. 1 Hr.
8. **Minor Sports.** I, II. 1 Hr. Staff
9. **Athletics.** I. 1 Hr. Soccer and Volleyball. Staff
10. **Athletics.** II. 1 Hr. Basketball and Softball. Staff

11, 12, 13, and 14. **Restricted Activities.** I, II. 1 Hr. (May be substituted for the required courses upon recommendation of the Health Service). Staff

15. **Advanced Modern Dancing.** I, II. 1 Hr. PR: Phys. Ed. 2. Staff
16. **Advanced Swimming, Diving, and Life Saving.** I, II. 1 Hr. PR: Phys. Ed. 1. Staff
17. **Tennis.** II. 1 Hr. Staff
57. **Gymnastics.** I, II. 1 Hr. Conditioning exercises. Staff

101, 102. **Service Program for Junior Women.** I and II. 1 Hr. Students may select any course from the above groups for which they have not previously received credit. Staff

103, 104. **Service Program for Senior Women.** I and II. 1 Hr. Students may select any course from the above groups for which they have not previously received credit. Staff

THE CURRICULUM FOR MAJORS

The curriculum for majors is organized to provide professional training for all men and women who are desirous of becoming teachers of health and physical education in the high schools and colleges or directors of recreation in municipal systems or technicians in physical therapy. During the past

decade there has been an increasing interest in the physical activities of the boys and girls of school age as well as in inter-institutional athletics. In 1927 the State of West Virginia adopted a state-wide program of physical education for all secondary schools of the state. To meet this need for adequately trained teachers of physical education the department of curriculum for majors was organized.

The courses are arranged to meet the University requirements for the degree of Bachelor of Science in Physical Education as well as the state requirements for certification. The curriculum for the four-year course has been so arranged that consideration is given to the various activities which should constitute a well-rounded program of physical education for boys and girls of high-school age.

The Four-year Curriculum in Physical Education

(Leading to the Degree of Bachelor of Science in Physical Education)

Physical education for men (47); for women (44); health education (4); recreation (7); safety education (2); English and speech (12); social studies (12); science—anatomy, biology, chemistry, physiology (20); education (20); military science (men) (8); electives (men) (23); electives (women) (25).

NOTE: Humanities 1 may be substituted for four Hrs. of social studies, and Humanities 2 fulfills the requirement in English Literature.

NOTE: For late changes in the system of numbering theory and practice courses in physical education, see the revised bulletin, "Announcements of the School of Physical Education and Athletics, 1947-48 Session."

The Curriculum in Physical Education for Men

FIRST YEAR

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
English 1	3	English 2	3
Biology 1	4	History 2	3
History 1	3	Phys. Ed. 14	1
Phys. Ed. 11	1	Phys. Ed. 45	1
Phys. Ed. 44	1	Speech 11	3
Phys. Ed. 71	1	Mil. Sci. 2	2
Mil. Sci. 1	2	Biol. or other electives	4
Electives	2 or 3		
	17 or 18		17

SECOND YEAR

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Chemistry 1	4	Chemistry 2	4
Phys. Ed. 46	1	Phys. Ed. 12	1
Phys. Ed. 113	1	Phys. Ed. 114	1
Phys. Ed. 77	2	Phys. Ed. 157	1
Recreation 1	2	Phys. Ed. 74	4
Mil. Sci. 3	2	Recreation 2	3
Electives	2 or 4	Health Ed. 2	2
		Mil. Sci. 4	2
	14 or 16		18

THIRD YEAR

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Educ. 106	3	Zoology 151	4
Educ. 109	2	Phys. Ed. 150	3
Phys. Ed. 111	2	Phys. Ed. 160	1
Phys. Ed. 156	1	Educ. or other electives	5 to 7
Phys. Ed. 175	3		
Safety Ed. 181	2		
First Aid	2		
Electives	3		
	18		14 or 16

FOURTH YEAR

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Phys. Ed. 191	2	Phys. Ed. 192	2
Phys. Ed. 141	1	Phys. Ed. 142	1
Phys. Ed. 143	1	Phys. Ed. 144	1
Phys. Ed. 158 (or elect.)	1	Phys. Ed. 158 (or elect.)	1
Health Ed. 101	2	Phys. Ed. 277	3
Educ. 120	2	Educ. 120	2
Educ. 152	2	Educ. 152	2
Educ. 224	3	Educ. 224	3
Educ. 214	2	Educ. 214	2
	16		17

The Curriculum in Physical Education for Women

FIRST YEAR

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
English 1	3	English 2	3
History 1 or Humanities 1	3 or 4	History 2 or Humanities 2	3 or 4
Biology 1	4	Phys. Ed. 5 (elect.)	1
Phys. Ed. 5 (elect.)	1	Phys. Ed. 15	1
Phys. Ed. 25	1	Phys. Ed. 16	1
Phys. Ed. 27	1	Phys. Ed. 24	1
Phys. Ed. 28	1	Biol. or other electives	4 to 7
Phys. Ed. 71	1		
	15 or 16		15 to 18

SECOND YEAR

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Chemistry 1	4	Chemistry 2	4
Phys. Ed. 37	1	Phys. Ed. 74	4
Phys. Ed. 59	1	Phys. Ed. 58	1
Phys. Ed. 77	2	Phys. Ed. 70	1
Phys. Ed. 167	2	Phys. Ed. 114	1
Recreation 1	2	Phys. Ed. 157	1
Elective	3 to 5	Recreation 2	3
		Health Ed. 2	2
		Phys. Ed. 38 (elect)	2
	15 to 17		17 to 19

THIRD YEAR

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Educ. 106	3	Zoology 151	4
Educ. 109	2	Phys. Ed. 57	1
Phys. Ed. 26	1	Phys. Ed. 60	1
Phys. Ed. 126	1	Phys. Ed. 151	2
Phys. Ed. 127	2	Phys. Ed. 166	3
Phys. Ed. 175	3	Electives	4 to 6
Safety. Ed. 181	2		
Electives	2		
	16		15 to 17

FOURTH YEAR

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Phys. Ed. 191	2	Phys, Ed. 192	2
Phys. Ed. 158 (or elect.)	1	Phys. Ed. 158 (or elect.)	1
Phys. Ed. 159	2	Phys. Ed. 160	2
Health Ed. 101	2	Phys. Ed. 277	3
Educ. 120	2	Educ. 120	2
Educ. 152	2	Educ. 152	2
Educ. 224	3	Educ. 224	3
Educ. 214	2	Educ. 214	2
	16		17

REQUIRED COURSES FOR MEN AND WOMEN: Introduction to Physical Education (1); Personal and Community Hygiene (2); School Health Problems (2);; he Camping Movement (2); Management and Direction of Playgrounds (2); Management and Direction of Social Centers (2); Administration of Public Recreation (2); Safety Education (2); Anatomy (4); Kinesiology (3); Administration of Physical Education (2). Total 24 hrs.

THE COURSES OF INSTRUCTION

Professors ROMNEY, GRIFFIN, and MORRIS; Associate Professor TORK; Assistant Professors ERLANGER, HURST, RODGERS, SMITH, and SEMON; Instructors EICHER, KERN, PATTON, THORN, WHITE, YOST, and HOWELL

LOWER DIVISION

11. **Football.** I. 1 Hr. Theory and practice in the fundamentals of football. Messrs. Kern and Rodgers
12. **High-school Activities.** I. 1 Hr. Theory and practice in an activity program suitable for junior and senior high-school boys. Mr. Semon
13. **Marching, Games, and Relays.** II. 1 Hr. Theory and practice in an activity program suitable for junior and senior high-school boys. Mr. Semon
14. **Baseball.** II. 1 Hr. Theory and practice in the fundamentals of baseball. Mr. Rodgers

28. **Modern Dancing.** I. 1 Hr. Elective. Miss Erlanger
43. **Club Leadership.** I. 1 Hr. Aims and program of activities of character-building organizations for boys. Mr. Semon
44. **Basketball.** I. 1 Hr. Theory and practice in the fundamentals of basketball. Mr. Patton
45. **Apparatus and Tumbling.** II. 1 Hr. Natural activities in tumbling and the fundamentals of work on the apparatus. Staff
46. **Track and Field Athletics.** II. 1 Hr. Theory and practice in the fundamentals of track and field athletics. Mr. Smith

UPPER DIVISION

111. **Athletic Conditioning and Training.** I. 1 Hr. Lectures, demonstrations, and practice work in the training and conditioning of athletes. Mr. Smith
113. **Wrestling and Boxing.** II. 1 Hr. Theory and practice in the fundamentals of wrestling and boxing. Mr. Rodgers
114. **Minor Sports.** II. 1 Hr. Theory and practice in the fundamentals of bowling, badminton, golf, handball, tennis, and volleyball. Staff
126. **Clog and Tap Dancing.** I. 1 Hr. Elective. Miss Hurst
131. **Service Program Assisting.** I. 1 Hr.
132. **Service Program Assisting.** II. 1 Hr.
141. **Theory of Coaching Football.** I and SII. 1 Hr. 9 weeks. Theory and practice including study of various systems and styles of play with special lectures on and practical experience in officiating. Messrs. Kern and Rodgers
142. **Theory of Coaching Track.** II and SII. 1 Hr. 9 weeks. Theory and practice, with special lectures on and practical experience in officiating, and administration of track and field meets. Mr. Smith
143. **Theory of Coaching Basketball.** I and SII. 1 Hr. 9 weeks. Theory and practice, including study of various systems and styles of play with special lectures on and practical experience in officiating. Mr. Patton
144. **Theory of Coaching Baseball.** II and SII. 1 Hr. 9 weeks. Theory and practice, with special lectures on and practical experience in officiating. Mr. Rodgers
156. **Swimming, Life-saving, and Water Safety.** II. 1 Hr. Theory and practice in aquatics and safety and their use in the program of physical education. An opportunity will be given to qualify for the American Red Cross Water Safety Instructor Certificate. Mr. Tork
157. **Graded Games and Lead-up Games.** I. 1 Hr. Games for all ages which may be used in the home, school, playground, and gymnasium, and lead-up games for the various sports. Miss Hurst
158. **Ballroom Dancing.** II. 1 Hr. Technique of ballroom dancing and methods of teaching. Staff
161. **Officiating Basketball and Football.** I. 2 Hrs. Rules, techniques of officiating, and laboratory work.

Theory and Practice of Physical Education for Women

Physical Education 15, 114, 24, 25, 26, 28, 38, and 71 are required of freshman women; Physical Education 16, 27, 59, 60, 70, 74, and 77 are required of sophomore women; Physical Education 57, 58, 126, 127, 151, 157, 158, 166, 167, 175, and 181 are required of junior women; and Physical Education 159, 160, 191, and 192 are required of senior women. Assisting is arranged individually at convenient hours and is required of all major students without credit.

NOTE: For late changes in the system of numbering theory and practice courses in physical education, see the revised bulletin, "Announcements of the School of Physical Education and Athletics, 1947-48 Session."

LOWER DIVISION

15. **Advanced Modern Dancing.** II. 1 Hr. Continuation of P. E. 28. Miss Erlanger
16. **Advanced Swimming.** II. 1 Hr. Continuation of P. E. 27, and technique of instruction. Staff
24. **Basketball Technique and Softball.** II. 1 Hr. Fundamentals and practice in softball, selected lead-up games. Technique and practice in teaching and officiating basketball. Miss White
25. **Soccer, Speedball, and Basketball.** I. 1 Hr. Fundamentals and practice in playing soccer, speedball, fieldball, and basketball. Miss White
26. **Minor Sports.** II. 1 Hr. Fundamentals and practice in playing paddle tennis, table tennis, and archery. Staff
27. **Swimming and Diving.** I. 1 Hr. Elementary and advanced strokes, standard dives. Staff
28. **Modern Dancing.** I. 1 Hr. Techniques of modern dance, methods of teaching different age groups, and a knowledge of the historical background of dancing from primitive times to the present. Miss Erlanger
38. **Dance Composition.** II. 2 Hrs. Problems in force, time, and space as elements of expressive movement. Miss Erlanger
57. **Gymnastics.** I. 1 Hr. The Swedish, German, and Danish gymnastic systems which have been practiced in the United States, studied as background for an understanding of the modern program. Staff
58. **Stunts, Tumbling, and Heavy Apparatus.** II. 1 Hr. Stunts, tumbling, and pyramid building suitable for elementary, junior, and senior high-school girls. Knowledge of and skill in heavy apparatus is included. Miss White
59. **Folk Dancing.** I. 1 Hr. The history of Folk Dancing, knowledge of fundamentals, and study of dances from all countries. Miss Hurst
60. **Folk Dancing.** II. 1 Hr. A continuation of P. E. 59. Miss Hurst
70. **Senior Life Saving and Water Saving.** As outlined by the American Red Cross. Theory of organizing and directing a camp water front.

UPPER DIVISION

114. **Minor Sports.** II. 1 Hr. Theory and practice in the fundamentals of bowling, badminton, golf, handball, tennis, and volleyball. Staff
126. **Clog and Tap Dancing.** I. 1 Hr. Fundamentals and practice in clog and tap dancing. Miss Husst

157. **Graded Games and Lead-up Games.** I. 1 Hr. Games for all ages which may be used in the home, school, playground, and gymnasium, and lead-up games in the various sports. Miss Hurst

158. **Ballroom Dancing.** II. 1 Hr. Technique of ballroom dancing and methods of teaching. Staff

159. **Materials Summary.** I. 1 Hr. Practice and techniques of physical-education activities. Officiating in intra-mural games. Staff

160. **Materials Summary.** II. 1 Hr. Continuation of P. E. 159. Staff

NOTE: An opportunity is provided for individual specialization in sports, swimming, or dancing, in addition to the activities of the block program. If students are especially interested in specialization in dancing, their course will include some allied subjects such as history of art, pageantry, dramatics.

Theory Courses in Physical Education

LOWER DIVISION

For Men and Women

Physical Education

71. **Introduction to Physical Education.** I. 1 Hr. Orientation course designed to acquaint students with purposes, scope, and possibilities in health, physical education, recreation, and coaching in the school program. Miss Griffin and Staff

*74. **Anatomy.** II. 4 Hrs. Required of Physical Education majors. Dr. Morris

77. **History of Physical Education.** I. 2 Hrs. The development of physical education from early civilization to the present time, giving attention to the early Greek and Roman periods, the German, Swedish, and Danish systems, and developments in the modern programs in the various countries. Miss Griffin

Health Education

2. **Personal and Community Hygiene.** II. 2 Hrs. Those phases of hygienic living which should be understood by all college students. Special emphasis placed on the personal aspects of hygiene. This course may not be elected as a substitute for Phys. Ed. 180. Mr. Semon

Recreation

1. **An Introductory Course.** I. 2 Hrs. Introducing the general field of recreation, including philosophy, aims, general objectives, specific fields, etc. Mr. Tork

2. **Playgrounds and Community Centers.** I. 3 Hrs. Arranged to prepare physical-education students for direction and supervision of playgrounds and social centers in the municipal-recreation program. Mr. Tork

3. **The Camping Movement.** I. 2 Hrs. Training camp counselors. The essentials embraced are: history of organized camps, aims, camp sites and equipment, activities, vocational opportunities, the requirements and qualifications of personnel. Mr. Smith

*Accepted by the State Department of Education as a cognate in the field of biology.

UPPER DIVISION

For Men

150. **Modified and Corrective Activities.** II. 3 Hrs. The diagnosis of abnormal cases found in the classroom including overweight, underweight, post-operative, postural, and flat-foot cases, with the prescription of activities for their correction. Staff

For Women

151. **Club Leadership for High-school Girls.** II, SII. 2 Hrs. A study of the Girl Scouts, Camp Fire Girls, Girl Reserves, and other movements which are designed as character-building organizations for adolescent girls. Special attention will be given to methods of leadership based on adolescent psychology. Miss Griffin

166. **Modified and Corrective Activities.** II. 3 Hrs. Analysis of normal posture and individual deviations with treatment of the latter by physical activity and massage. The course will cover personal health problems that can be treated by exercise. Miss White

167. **Movement and Its Rhythmic Structure.** I. 2 Hrs. Designed to give an understanding of the nature and scope of rhythm in the physical education program. Opportunity is offered for practice in the analysis of dance steps and the building of dance patterns. Miss Erlanger

For Men and Women

127. **First Aid.** I. 2 Hrs. Standard and Advanced First Aid as outlined by the American Red Cross plus the Special Course which is given by a representative from National Red Cross Headquarters. Miss Hurst

175. **Kinesiology.** I. 3 Hrs. The principles of the mechanics of bodily movements in relation to the anatomical structure. Miss White

181. **Safety Education.** II. 2 Hrs. Safety needs and practices in the home, on the highways and streets, in schools and on playgrounds, and in industry. Educational procedures and programs of education at various levels are presented. Miss Griffin

277. **Administration of Physical Education.** II and SI. 2 or 3 Hrs. The modern theories in physical education and guiding principles in organization and administration of the program. Mr. Romney

Health Education

101. **School Health Problems.** I. 2 Hrs. Problems facing teachers and school administrators in the school day. Staff

180. **Public-school Health.** I, II. 2 Hrs. This course in hygiene meets the general requirements for state teachers' certificates. (Not open to major physical-education students.) Dr. Morris

191. **Tests in Health and Physical Education.** I, SI. 2 Hrs. Anthropometric and functional tests in health and physical education. Staff

192. **Physiological Analysis of Activities.** II, SII. 2 Hrs. A beginning course in the study of physiological changes which occur in the body during exercise. Staff

The Graduate Curriculum in Physical Education

(Leading to the Degree of Master of Science)

I. CANDIDACY:

The candidate must hold the degree of Bachelor of Science in Physical Education or its equivalent from an approved college. The equivalent is determined by the Committee on Graduate Courses of the School of Physical Education and Athletics as follows:

1. At least 24 semester hours, which is an undergraduate minor in physical education as described in the University's Bulletin, **Requirements Applicable to Degrees and to Teacher Certification.**

2. Experience in participating in athletics, in teaching health and physical education courses, and in coaching athletics will be evaluated by special examination as possible equivalents to some of the above requirements. Former members of the armed forces may establish credit for educational experience either by certification or examination.

3. Additional undergraduate hours may be required of students who have had inadequate preparation.

II. MATRICULATION:

Students who wish to register in the Graduate School should: (1) Have an official transcript of college credits sent to the Registrar; (2) File formal application for Admission to the Graduate School with the chairman of the Graduate Council, 320 Chemistry Building; (3) Fill out two sets of forms for evaluation of credits and experience and return to the chairman of the Committee on Graduate Courses of the School of Physical Education and Athletics.

NOTE 1: *Graduate credit accepted from other approved institutions.*

1. No less than 30 hours, including a thesis, of graduate work approved by the Graduate Council, the Adviser, and the Committee on Graduate Courses of the School of Physical Education and Athletics, are required. At least 15 hours, exclusive of the thesis, will be in Physical Education, and the remaining hours in related subjects or other fields. One-third of the hours required for the degree must be in course numbered 300 or above.

NOTE 2: *Substitution of course work for thesis.*

A maximum of six semester hours of graduate work of grade C or above may, by prior written agreement with the adviser and Graduate Council, be accepted toward a Master's degree from any approved institution, provided the total of all work for the Master's degree by extension and from another institution will not exceed 15 semester hours.

III. COURSE REQUIREMENTS:

Especially qualified students may petition for permission to substitute for the Master's thesis 6 hours of work over and above the 30 hours regularly required for the Master's degree.

NOTE: Courses marked by an asterisk (*) are required of all candidates for the Master of Science degree.

224. Physiological Analysis of Activities. I and SII. 2 Hrs. Analysis of physiological changes which occur in the body during exercise. Miss Erlanger

243. National Youth Service Organizations and Their Contribution to Health and Physical Education and Recreation. SI. 2 Hrs. This course will discuss the organization and program of national agencies and their potential contributions to the school program in health education, physical education, and recreation.

271. **Administration of Camps and the Preparation of Camp Counselors.** II and SI. 3 Hrs. The principles involved in the modern camping program and the methods of organization and administration of organized camps. A special problem in administration or program will be undertaken. Mr. Tork

276.* **Advanced Public-school Health.** I, II, and SI. 2 or 3 Hrs. Preventive medicine and hygiene with particular emphasis on recent advances. Dr. Morris

277.* **Administration of Physical Education.** II and SI. 2 or 3 Hrs. The modern theories in physical education; guiding principles in the organization and administration of physical education; and the objectives, content, and materials of activities in the gymnasium and on the playground. Staff

279s. **Safety Education—Safe Driving.** SII. 1 Hr. Open to selected high-school teachers. Mr. Eicher

281. **Safety Education.** II, SI. 2 Hrs. A study of the modern safety education program and its place in the public school day. Various educational methods which will make for the reduction of common accidents in factories, the home, the school, the street, camps, and playgrounds will be considered. Term paper required. Miss Griffin

282. **Administration of Public Recreation.** I and SI. 2 Hrs. The modern concept of the public recreation program and its contribution to the leisure time problem. A special problem in organization or program will be undertaken. Mr. Romney

283. **Organization and Development of Industrial Recreation.** II and SI. 2 Hrs. Primarily for students who have had some work or experience in recreation and are interested in a more complete knowledge of the field or plan to seek positions in industrial recreation. Mr. Tork

287. **History of Physical Education.** I and SI. 2 Hrs. The development of physical education from early civilization to the present time with particular emphasis on its relation to general education and other world movements. Miss Griffin

290. **Adaptation and Evaluation of Activities in Physical Education.** II and SI. 2 Hrs. The formulation of criteria for continuous curriculum revision in accord with educational principles and in recognition of individual needs, abilities, and interests. A special problem will be undertaken. Miss Griffin

292. **Principles and Program of Physical Education in the Elementary Schools.** SI. 2 Hrs. Relation of physical education in the elementary schools to present-day educational philosophy and procedures. Analysis of courses of study of outstanding city and state departments as a background for formulating tentative curricula for use in local situations. Mr. Tork

293. **Organization and Administration of Intramural Sports for Men and Women.** I, SI. 2 Hrs. A critical analysis of intramural sports programs with a view to justification from the standpoint of objectives and of contribution to the general welfare of the students participating. Problems of organization and administration of programs for men and women on the secondary and college levels. A term paper of practical value will be required. Mr. Semon

294. **Modern Trends and Principles of Physical Education.** II and SI. 2 Hrs. Critical analysis of current problems in field of physical and health education and their solution in the light of sound principles. Recent trends and probable growth of responsibilities will be surveyed. Mr. Semon

300.* **Thesis.** I, II, SI, and SII. 2 Hrs. Mr. Webster

369. **Independent Study in Health and Physical Education.** II, SII. 2 Hrs. Opportunity for independent study under supervision.

374. **Psychology of Coaching.** I and II. 2 Hrs. Psychological principles underlying present methods of coaching athletic sports. Laws of learning, current experiments, and selection of teaching material. Mr. Tork

378.* **Problems in Health and Physical Education.** I, II, SI, and SII. 2 Hrs. Solution of selected problems in health and physical education. Staff

389.* **Tests in Health and Physical Education.** II, SI, and SII. 2 Hrs. Anthropometric and functional tests in health and physical education. Staff

396.* **Seminar in Health and Physical Education.** I and SI. 2 Hrs. Limited to advanced students who have had experience in this field and who have a fundamental knowledge of educational research. The Master's thesis may be initiated in this course. Staff

Part IV

Degrees Conferred by the University

DEGREES CONFERRED IN 1945-46

The following is a list of degrees conferred by the University during the year 1945-46. Degrees conferred on August 24, 1945, are indicated by an asterisk (*); those conferred on January 26, 1946, by a double asterisk (**). All other degrees were conferred on Commencement Day, June 3, 1946.

BACHELOR OF ARTS

Helen Louise Ambler	Mathematics	Morgantown
Nancy Lee Amos	History	Wheeling
Liberty Marian Antalis	English	Weirton
Georgia Hazel Austin	French	Walton, N. Y.
Jeanne Baker	Psychology	Morgantown
**Marjorie Thomas Ballengee	Speech	Beckley
Dee Anne Bonsib	Psychology	Scarsdale, N. Y.
Eleanor Margaret Boyle	Psychology	Morgantown
William Brannan	Pre-Medicine	Morgantown
Anastasia Burns	History	Coram, N. Y.
William Forrest Carroll	Pre-Medicine	Morgantown
Amelita Velia Cartelle	Spanish	Oak Hill
Ramona Jean Chapman	Chemistry	Chester
Kathleen Carr Coleman	Psychology	Wheeling
Robert Calton Cowan, Jr.	Pre-Medicine	Morgantown
*Fred John Coyer	English	Lansing
**Katherine Ann Creel	French	Morgantown
Martha Marie Cross	English	Philippi
Edna Kathleen Crummett	English	Harrisville
Max Wayne Carl Cubbon	English	Clarksburg
Julia Lee DeBolt	English	Fairmont
Margaret Anne DeFazio	English	Clarksburg
*Annie Catherine Delp	English	Mullens
*Maxine Deutsch	Speech	Charleston
**Marcus William Dodd	Physics	Charleston
Mary Ellin Duncan	Speech	Morgantown
Patricia Anne Duncan	Zoology	Thomas
Mary Frances Dunlap	Pre-Medicine	Saint Albans
Carolyn Ruth Eberly	Speech	Uniontown, Pa.
Janet Kay Echols	English	Lewisburg
**Guy Buele Epling	Political Science	Charleston
Ruth Eskew	Speech	Charleston
Evelyn Ruth Fogle	Library Science	Morgantown
Carol Leyman French	Speech	Welch
*Irene Lucille Gallagher	Pre-Medicine	Wheeling
Dorsey Carlyle Gamsjager	Pre-Medicine	Grafton

**Hettie Jo Gates	Psychology	Charleston
Lela Glassberg	Sociology	Linden, N. J.
Virginia Ruth Godfrey	Psychology	Morgantown
*Paul Edwin Gordon	Pre-Medicine	Clarksburg
William Fred Gott	Economics	Charleston
*Janis Gover	Pre-Medicine	Charleston
Margaret Ann Gower	Pre-Medicine	Fairmont
James Alexander Graham	Pre-Law	Clarksburg
*Robert Greco	Pre-Medicine	Everettville
**Frank Tod Griffith	Political Science	Saint Albans
**Michael Gussie	History	Everettville
*Thomas Brock Hardman	Pre-Medicine	Morgantown
Wilda Jean Harold	Art	Harrisville
Howard Thomas Hughes, Jr.	Chemistry	Rices Landing, Pa.
*Ernest Quentin Hull	Pre-Medicine	Charleston
Marjorie Ann Ice	Speech	Parkersburg
**Florence Olivia Isenberg	Sociology	Pittsburgh, Pa.
*Thomas Richards Johns II	Pre-Medicine	Morgantown
Marjorie Ruth Jones	Spanish	Wheeling
*Harold Oliver Kamons	Pre-Medicine	Parkersburg
*James Staats Kessel	Pre-Medicine	Ripley
*Mary Katherine Kincaid	Pre-Medicine	Summersville
Laeh Klein	Sociology	Morgantown
*Lucille Mary Kraus	Political Science	Great Neck, N. Y.
Alice Clare Leach	Psychology	Morgantown
Barbara Leigh Lemley	English	Fairmont
Richard Allen Lewis	Pre-Medicine	Charleston
**Leo John Littman, Jr.	Economics	Albert
Helen Elizabeth Loar	Library Science	Morgantown
Jeanne Trevillian Lough	History	Morgantown
Huston Thomas Lyttleton	Political Science	Charleston
Peggy Nelson McClung	Art	Martinsburg
Margaret J. Rardin McConnell	Speech	Chester
Robert Mullen McCune, Jr.	Pre-Medicine	Morgantown
John Howard McCutcheon	Pre-Law	Green Bank
Robert Gayle McQuain	Zoology	Walkersville
**Ralph Miller	Chemistry	Saint George
Agnes Mary Minor	English	Morgantown
*Floy Jack Moore	Pre-Medicine	Moundsville
*William C Morgan, Jr.	Pre-Medicine	Welch
William Richard Morgan	Pre-Medicine	Fairmont
Louise Lorentz Muffly	Sociology	Morgantown
*David Walker Mullins	Pre-Medicine	Logan
Martha Jo Murray	French	Clarksburg
*Joseph Morton Natterson	Pre-Medicine	Wheeling
Lena Irene Orlandi	Pre-Medicine	Ashford
**Milton Merrele Ostroff	Pre-Medicine	Charleston
*Ernest Franklin Pauley	Economics	Charleston

Dorothy Marie Puffinberger	French	Martinsburg
Florence Marjorie Quinn	Mathematics	Morgantown
*Jean Reycroft	Botany	Monessen, Pa.
*Raymond J. Reynolds	Pre-Medicine	Charleston
*Robert Earl Richard	Pre-Medicine	Morgantown
Elizabeth Ann Riggs	Psychology	Moundsville
William McDaniel Schaeffer	Journalism	Morgantown
Aaron Maurice Schwartz	Pre-Medicine	New York, N. Y.
*Emerson Grant Shannon	Pre-Medicine	Welch
Charlotte Shapiro	Sociology	Keyser
Tony Wright Shillingburg	Sociology	Bismarck
Artha Jane Shutts	Pre-Medicine	Fairmont
Carl Ellsworth Slaughter	Political Science	Morgantown
Cody Lane Smith	Pre-Medicine	Weston
*Gene Hope Smith	Pre-Medicine	Morgantown
*Mary Ashworth Smith	Pre-Medicine	Beckley
**Mary Kathryn Smith	Pre-Medicine	Glenville
Vivian Hall Smith	Art	Morgantown
Margaret Patricia Speissegger	Psychology	Charleston
*Richard George Stansbury	Economics	Charleston
Barbara Bennett Stathers	History	Clarksburg
*Donald Karl Stockdale	Pre-Medicine	Morgantown
Emmy Henrietta Sturken	Zoology	Closter, N. J.
Ara Long Sumney	Pre-Law	Pine Grove
**Darrel Harold William Burl Tallman	Political Science	Ridgeley
Ann Elliott Taylor	Sociology	Charleston
Orville Harold Taylor	Economics	Brooklyn, N. Y.
Harry Ernst Walkup	Pre-Medicine	Mount Hope
Virgie Rowles Wallace	English	Belle
Nancy Louise Wooster	Speech	Morgantown
Frank Roy Yoke, Jr.	Pre-Law	Parkersburg
Nancy Juliana Zinn	Speech	Wheeling

BACHELOR OF SCIENCE (Business Administration)

James David Bailey	Bluefield
Anna Mary Bowling	White Sulphur Springs
Wesley Craft Brashear	Morgantown
Margaret Alice Collins	Grafton
Willa Printz Copenhaver	Grafton
George Thomas Dodd	Moorefield
Donald Dean Franz	Morgantown
Betty Lewis Gates	Charleston
Mary Jane Holden	Wheeling
Richard Paul Hutchinson	Fairmont
**Robert Morris Kerns	Bridgeport
Helen Marie Ketchum	Wayne
Blanche Leonard	Parkersburg

**Eleanor Lenore McComas . . . . . Huntington
Tommie Ballard McCoy . . . . . Peterstown
George Lyle McQuistion . . . . . Morgantown
Dorothea Mae Smith . . . . . Morgantown
Flora Jane Stewart . . . . . Charleston

BACHELOR OF SCIENCE (Chemistry)

John Minge Bolling . . . . . Huntsville, Ala.
Thelma Louise Cain . . . . . Fairmont
Mary Elizabeth Forman . . . . . Clarksburg
Dora Lee Harris . . . . . Chester
Jean Anita Long . . . . . Morgantown
Betty Lanier Watson . . . . . Thomas

BACHELOR OF SCIENCE (Social Work)

Malmarie Beveridge . . . . . Morgantown
Acacia Bernice Crowell . . . . . Charleston
Carolyn Mary Earnshaw . . . . . Glen Dale
Martha Jane Fleming . . . . . Clarksburg
Ruth Ann Fundis . . . . . Wheeling
Rebecca Lee Hughes . . . . . Charleston
Carolyn Nell Reed . . . . . Glenville

BACHELOR OF SCIENCE

Edward Nolan Adams . . . . . Tyler, Texas
Regina Margaret Barberia . . . . . Morgantown
A. B., West Virginia University, 1943
*Richard Waitman Berry . . . . . Flatwoods
A. B., West Virginia University, 1944
*Elmond LeMoyne Coffield . . . . . Morgantown
A. B., West Virginia University, 1944
Lee Roy Minor Conn . . . . . Blacksville
Albert James Davis, Jr. . . . . Danville, Va.
Nevea Ilda Donell . . . . . Weirton
A. B., West Virginia University, 1944
Edward Arnold Felder . . . . . Norwich, Conn.
A. B., University of Miami, 1945
*Emil Joseph Ferrara . . . . . Morgantown
A. B., West Virginia University, 1944
*Vernetta Eileen Fike . . . . . Morgantown
A. B., West Virginia University, 1945
Paul Edwin Gordon . . . . . Clarksburg
A. B., West Virginia University, 1945
*Ray Silvio Greco . . . . . Fairmont
A. B., West Virginia University, 1944
Robert Greco . . . . . Everettville
A. B., West Virginia University, 1945
Thomas Brock Hardman . . . . . Morgantown
A. B., West Virginia University, 1945
*David Alonzo Haught, Jr. . . . . Huntington
B. S., Pharm., West Virginia University, 1943
*William Sawyers Herold . . . . . Summersville
A. B., West Virginia University, 1944

Leonard Preston Hudnall . . . . . Pratt
B. S., West Virginia Institute of Technology, 1945
Ernest Quentin Hull . . . . . Charleston
A. B., West Virginia University, 1945
*Shelby Edward Jarrell . . . . . Packsville
William Eugene Kincaid . . . . . Parkersburg
*Clarence Archie Logue . . . . . Newell
*Louis Amadea Loria . . . . . Hepzibah
A. B., West Virginia University, 1944
Ewing William McPherson . . . . . Derby, Va.
B. S., Emory and Henry College, 1944
Michael Judson Moore . . . . . Killarney
A. B., West Virginia University, 1945
*Margaret Agnes Morgan . . . . . Beckley
A. B., West Virginia University, 1944
*Richard Young Morgan . . . . . Mount Hope
A. B., West Virginia University, 1944
William C Morgan, Jr. . . . . Welch
A. B., West Virginia University, 1945
David Walker Mullins . . . . . Logan
A. B., West Virginia University, 1945
*Karl Johnson Myers, Jr. . . . . Philippi
A. B., West Virginia University, 1944
Joseph Morton Natterson . . . . . Wheeling
A. B., West Virginia University, 1945
Albert Edward O'Hara . . . . . Weston
B. S., West Virginia Wesleyan College, 1944
*Frank McDonald Peck . . . . . Logan
A. B., West Virginia University, 1943
*James William Peck . . . . . Summersville
*William Allan Phillips . . . . . Wheeling
A. B., West Virginia University, 1944
*Robert Martin Poske . . . . . Indianapolis, Ind
B. S. (Chem.), West Virginia University, 1944
Raymond J. Reynolds . . . . . Charleston
A. B., West Virginia University, 1945
Robert Earl Richard . . . . . Morgantown
A. B., West Virginia University, 1945
John Thomas Rodgers . . . . . Wellsburg
*Eugene Philip Salvati . . . . . Holden
A. B., West Virginia University, 1944
Warren Glea Sarrell . . . . . Ellijay, Ga.
Richard Samuel Stephens . . . . . Bluefield
A. B., West Virginia University, 1944
Donald Karl Stockdale . . . . . Morgantown
A. B., West Virginia University, 1945
*Leon Stutzman . . . . . Shepherdstown
A. B., West Virginia University, 1944
*Roy Sherman Temeles . . . . . Weirton
A. B., West Virginia University, 1944
*Charles Woodrow Thacker . . . . . Philippi
*James Alpha Thompson . . . . . Clarksburg
A. B., West Virginia University, 1944
Clarence Vincent Townsend . . . . . Martinsburg
A. B., West Virginia University, 1944
*Carl Christopher Tully . . . . . Charleston
B. S., Morris Harvey College, 1937

*William Nelson Walker, Jr. . . . . Clarksburg
A.B., West Virginia University, 1943
*William Tilden Williams . . . . . Beckley
A. B., West Virginia University, 1944
Robert Clark Wingfield . . . . . Elkins
A. B., West Virginia University, 1944
Robert Gerald Wysong . . . . . Clarksburg
A. B., West Virginia University, 1944

BACHELOR OF LAWS

Mat Daniel Bouldin, Jr. . . . . Burnwell
A. B., West Virginia University, 1939
**Leo Bridi . . . . . Lester
James Wesley Gilmer . . . . . Matoaka
A. B., West Virginia University, 1941
John Grant Hackney . . . . . Charleston
A. B., West Virginia University, 1941
Peter Woodrow Hendricks . . . . . Orgas
A. B., New River State College, 1939
Franklin William Kern . . . . . Charleston
A. B., Morris Harvey College, 1940
Robert Franklin Martin . . . . . Shinnston
A. B., West Virginia University, 1933
M. S., West Virginia University, 1934
George Willis May . . . . . Fairmont
A. B., West Virginia University, 1944
Isaac Raymond Murphy . . . . . Philippi
A. B., Concord State Normal School, 1925
A. M., University of Cincinnati, 1930
**Vance Evans Sencindiver . . . . . Martinsburg
A. B., West Virginia University, 1944
**Charles Vincent Wehner . . . . . Chester
A. B., West Virginia University, 1943

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

Edward Peter Bartkus . . . . . Thomas
B. S. (Ch. E. Elect.), West Virginia University, 1941
**Benjamin Goldman . . . . . Weirton
James Simms Miller . . . . . Saint Albans
Dickran Avedis Tefankjian . . . . . North Bergen, N. J.
**Mary Lawson Williams . . . . . Morgantown

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

**Anthony Carl Colangelo . . . . . Pittsburgh, Pa.
**John Joseph Ridgeway . . . . . Point Marion, Pa.
Harry Allen Talbott . . . . . Morgantown

BACHELOR OF SCIENCE (Electrical Engineering Electives)

**Arthur Ernest Previll . . . . . Rand

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Charles Eugene Brockmeyer . . . . . Charleston
A. B., Marshall College, 1933
B. S. (Eng. Elect.), West Virginia University, 1934

George Sturgiss Chadwick, Jr. . . . . Fairmont
Jack Evans . . . . . Crumpler
Richard Henry Gabriel . . . . . Fairmont
Charles Franklin Peer . . . . . Charles Town
**Harley Gordon Pyles . . . . . Fairmont
Fred Jacob Seiler, Jr. . . . . Morgantown

BACHELOR OF SCIENCE IN AGRICULTURE

Oliver Teays Burgess . . . . . Saint Albans
Herbert Taylor DeRigo . . . . . Star City
Stanford Fertig . . . . . Marlinton
George Riley Fortney . . . . . Enterprise
Junior Darle Louke . . . . . Mill Creek
Hobert Kenneth Nicholson . . . . . Avon
Jules Vincent Powell . . . . . Clarksburg
Shannon Panter Scott . . . . . Princeton
*Charles Leon Smith . . . . . Ravenswood
**Donald Kenneth Summers . . . . . Charleston
Charles William Stemple . . . . . Aurora
*Elwood Alex Wagoner . . . . . Springfield

BACHELOR OF SCIENCE IN HOME ECONOMICS

Doris Spray Belt . . . . . Troy
Martha Jean Blake . . . . . Saint Marys
Ruth Pendleton Boggs . . . . . Franklin
Mary Lenore Boyles . . . . . Clarksburg
Glenda Gene Callahan . . . . . Camden-on-Gauley
Jayne Catherine Carder . . . . . Morgantown
Dorothy Elizabeth Cox . . . . . Huttonsville
Cecelia Debendarfer . . . . . Grafton
**Mary Louise Elmore . . . . . Tariff
Ernestine Lewis Ferguson . . . . . Morgantown
**Lena Jo Hauldren . . . . . Hamlin
Mary Kathleen Headlee . . . . . Morgantown
Martha Jeanne Hopkins . . . . . Cameron
**Delores Grace Kappos . . . . . Wheeling
*Lucille Hosey Lawall . . . . . Morgantown
Ruth Virginia Lee . . . . . Clarksburg
Bree Coffindaffer Morecraft . . . . . Gassaway
Mary Bishoff Orr . . . . . Morgantown
*Sylvia Hall Phillips . . . . . Philippi
**Mary Lois Price . . . . . Bridgeport
Betty Louise Pyle . . . . . Morgantown
Marjorie Ann Ramsey . . . . . Logan
Elizabeth Jane Randal . . . . . Williamson
**Geraldine Winifred Reed . . . . . Newburg
Jane Ann Roll . . . . . Charleston
June Rose Simmons . . . . . Clarksburg

**Joanna Violet Strosnider . . . . . Blacksville
**Betty Jo Sullivan . . . . . Pennsboro
Zillah Hortence Taylor . . . . . Newburg
Beulah Grace Wilson . . . . . Brandonville

BACHELOR OF SCIENCE IN FORESTRY

Roland Dyer Cowger . . . . . Fort Seybert
Percy Fonce Deverick . . . . . Walton
Donald Hall Lough . . . . . Morgantown

BACHELOR OF SCIENCE IN EDUCATION

Gerlanda Vincenza Amato . . . . . Pemberton
**Barbara Vossler Babb . . . . . Maysville
Daisy Walters Bell . . . . . Morgantown
**Mary Matilda Calemine . . . . . Keyser
*Agnes Dicken Cannon . . . . . Levels
*Barbara Watkins Dent . . . . . Morgantown
Marjorie Smith Durling . . . . . Philippi
Mary Eleanor Gibson . . . . . Charleston
Nancy Annice Hamilton . . . . . Philippi
*Thelma Shreeves Houldsworth . . . . . Charleston
Emily Flint Humphries . . . . . Hinton
Betty Hermine Landau . . . . . Charleston
Mildred Lazich . . . . . Weirton
**Margaret Newlon Montgomery . . . . . Tunnelton
Megan Eleanor Pritchard . . . . . Morgantown
Albert Roy Raines . . . . . Riverton
**James Nutter Rice . . . . . Elkins
Helen Mae Sheffer . . . . . Charleston
Margaret Ladriere Smith . . . . . Pennsboro
Mary Jane Webster . . . . . Martinsburg

BACHELOR IN SCIENCE IN PHARMACY

Mary Theresa Angotti . . . . . Morgantown
Mary Virginia Dent . . . . . Grafton
Frances Mayfield Montagna . . . . . Morgantown
B. S. H. E., West Virginia University, 1940
**George Bowers Rice . . . . . Shinnston
A. B. in Ed., Fairmont State Teachers College, 1939

BACHELOR OF MUSIC IN PUBLIC SCHOOL MUSIC

Virginia Lindsey Boyles . . . . . Philippi
*Antonetta Constance Canacari . . . . . Morgantown
*Bernelle Virginia Davidson . . . . . Hagerstown, Md.
Frank George DeVincent . . . . . Morgantown
Dorothy Lee Glover . . . . . Burton
*Ann Davis Hewitt . . . . . Harrisville
*Robert William Hill . . . . . Morgantown

Ellenor Jean McCrady . . . . . Clay
Eleanor Spangler Noland . . . . . Morgantown
Helen Vesta Robinett . . . . . Wayne
Helen Florence Rogerson . . . . . Clarksburg
**Helen Ann Stobinsky . . . . . Oak Hill
Dorothy Eloise Wildman . . . . . Morgantown
Mary Elizabeth Wiles . . . . . Fairmont

BACHELOR OF SCIENCE IN ENGINEERING OF MINES

Robert Moore Lewis . . . . . Otsego

BACHELOR OF SCIENCE IN PHYSICAL EDUCATION

June Hope Burford . . . . . Charleston
Robert Rollie Dutton . . . . . Morgantown
*Doris Eleanor Dye . . . . . Elkins
**Betty Elaine Johnson . . . . . Everettville
Josephine Elizabeth Kelly . . . . . Morgantown
Yvonne Auvil Lowther . . . . . Booth
William Newton McGee, Jr. . . . . Morgantown
Natalie Blair Pembroke . . . . . Grafton
Sylvia Belle Price . . . . . Marmet
Lilly Maxine Ward . . . . . Morgantown

BACHELOR OF SCIENCE IN JOURNALISM

Sarah Louise Arnett . . . . . Inwood
Charles Wesley Edgar, Jr. . . . . New Martinsville
*Emma Josephine Hill . . . . . Charleston
Marjorie Lamb . . . . . Fairmont
Emma Woodyard Laughlin . . . . . Spencer
**Mary Elizabeth Roles . . . . . Lillybrook
Dixie Irene Smith . . . . . Parkersburg
Sarah Jeanne Smith . . . . . Wheeling
**Nicha Soure . . . . . White Sulphur Springs

CHEMICAL ENGINEER

*Randolph C. Specht . . . . . Knoxville, Tenn.

MASTER OF ARTS

*Henry Sheldon Areford . . . Education . . . Morgantown
A. B., West Virginia University, 1927
Claire Burns Bailey . . . . Education . . . Morgantown
A. B., West Virginia University, 1921
*Nellie Rozella Baliker . . . Education . . . Star City
A. B. in Ed., Fairmont State Teachers College, 1942
*Wanda Netau Beall . . . . English . . . . Uffington
A. B., West Virginia University, 1927
*Juanita Shahan Blackburn . English . . . . Saint George
A. B., West Virginia University, 1941
*William Thomas Blankenship Education . . . Gauley Bridge
A. B. in Ed., Concord College, 1943
*Edith Blumert . . . . . English . . . . Hollidays Cove
B. S. Ed., West Virginia University, 1941
*Josephine Jentes Brickels . English . . . . Morgantown
B. S. Ed., Ohio State University, 1929

*Edward Bridi . . . . . Education . . . Lester
A. B. in Ed., Concord State Teachers College, 1933
**Ruby Florence Bright . . . Education . . . Dunbar
A. B., West Virginia University, 1917
*James Kenna Burke . . . . Political Science . Newburg
A. B. in Ed., Fairmont State Teachers College, 1932
Jacob Ernest Campbell . . . Education . . . Morgantown
LL. B., West Virginia University, 1929
**Francis Michael Casey . . . Education . . . Wheeling
B. S. in Ed., Fordham University, 1929
*Justus Arthur Deahl . . . . Education . . . Tunnelton
A. B., West Virginia Wesleyan College, 1926
Henry Clinton Fike . . . . Education . . . Morgantown
A. B. in Ed., Fairmont State Teachers College, 1940
*Clyde Foley . . . . . Education . . . Bruceton Mills
A. B. in Ed., Fairmont State Teachers College, 1938
*Delbert Excell Gilmore . . . Education . . . Hundred
B. S. Ed., University of Cincinnati, 1939
*Morris Jacob Haller . . . . Education . . . Morgantown
A. B., West Virginia University, 1917
Verona Clayton Haller . . . Education . . . Morgantown
A. B., West Virginia University, 1923
*Curtis Langford Harbert . . Education . . . Madison
A. B. in Ed., Fairmont State Teachers College, 1936
*Elinore Scott Hutchinson . . Education . . . Sandyville
A. B., West Virginia University, 1921
*Victorine Augusta Louistall . Education . . . Clarksburg
B. S. Bus. Ad., West Virginia State College, 1936
*Elouise Postlethwaite McCoy Education . . . Akron, Ohio
A. B. in Ed., Fairmont State Teachers College, 1934
**Summers Dailey McCrum, Jr. History . . . . Kingwood
A. B. in El. Ed., Shepherd College, 1941
Blanche Jean McQuiston . . Education . . . Morgantown
A. B., West Virginia University, 1939
**Ollie Mayhall . . . . . Education . . . Moundsville
A. B., West Liberty State Teachers College, 1937
*Webster Earl Miller . . . . Education . . . Terra Alta
A. B., West Virginia University, 1928
Myrtle Alice Phares . . . . Education . . . Morgantown
A. B. in El. Ed., Davis and Elkins College, 1937
Verdie Phares . . . . . Education . . . Morgantown
A. B. in El. Ed., Davis and Elkins College, 1937
Harold Barr Proudfoot . . . Education . . . Grantsville
A. B., West Virginia University, 1930
*Otis Kermit Rice . . . . . Education . . . Hugheston
B. S. in El. Ed., Morris Harvey College, 1943
A. B., Morris Harvey College, 1944
*Georgia Anthony Roller . . . Political Science . Charleston
A. B. in Ed., Morris Harvey College, 1932
*Kate Meredith Roller . . . . Education . . . Morgantown
A. B., West Virginia University, 1916
Kenneth Charles Schubel . . Economics . . . Irvington, N. J.
A. B., West Virginia University, 1945
*Cecil Rosco Shrewsberry . . Education . . . Odd
A. B. in Ed., Concord State Teachers College, 1941
Genevieve Poland Smell . . . Education . . . Morgantown
A. B., West Virginia University, 1917
Joseph Franklin Snider . . . History . . . . Grafton
A. B. in Ed., Fairmont State Teachers College, 1937

**Mary E. Williams Tamplin . Education . . . Racine
B. S. Ed., West Virginia University, 1936
**Sigel Elridge Taylor . . . . Education . . . Spencer
A. B. in Ed., Glenville State Teachers College, 1935
*Opal Gertrude Vincent . . . Education . . . Cairo
A. B., West Virginia University, 1926
*Andrew Lawrence Walker . . Education . . . Mount Hope
A. B., West Virginia University, 1928
*Leo Walter Watkins . . . . Education . . . Cassville
B. S. Ed., West Virginia University, 1940
*Warren Stewart Way . . . . Education . . . Madison
A. B., Georgetown College, 1935
**Margaret S. Willard . . . . Education . . . Morgantown
A. B. in Ed., Fairmont State Teachers College, 1937

MASTER OF SCIENCE

Russell Clarke Butler . . . Vocational Agr. . Morgantown
B. S. Agr., West Virginia University, 1930
Wilbert Franklin Chambers . Zoology . . . . Weirton
A. B., West Virginia University, 1945
Donald Wayne Eicher . . . Physical Education Morgantown
A. B., West Virginia Wesleyan College, 1937
Lemuel Goode . . . . . Animal Husbandry Saulsville
B. S. Agr., West Virginia University, 1942
Harry Richard Lothes . . . Physical Education Dunbar
B. S. P. E., West Virginia University, 1940
Thomas Roy Manley . . . . Genetics . . . . Fairmont
A. B. in Ed., Fairmont State Teachers College, 1940
*Zoila Reyes-Galvis . . . . . Chemistry . . . Bogota, Colombia
A. B., West Virginia University, 1945
**John Semon . . . . . Physical Education Morgantown
B. S. P. E., West Virginia University, 1938
Charles Roy Shirley . . . . Vocational Agr. . Berkeley Springs
B. S. Agr., West Virginia University, 1941
Genevieve Fike Ward . . . Physical Education Morgantown
B. S. P. E., West Virginia University, 1941
Charity Wheeler White . . . Physical Education Bridgeport
A. B. in Ed., Fairmont State Teachers College, 1938

MASTER OF SCIENCE IN ELECTRICAL ENGINEERING

*Donald Thompson Worrell . . . . . Morgantown
B. S. E. E., West Virginia University, 1940

MASTER OF SCIENCE (Home Economics Education)

*Vada Kathryn Atha . . . . . Barrackville
A. B. in Ed., Fairmont State Teachers College, 1939
**Mabel Sidell Spencer . . . . . New Martinsville
B. S. H. E., West Virginia University, 1925

MASTER OF MUSIC

*Emma Jane Rhodes . . . . . Point Marion, Pa.
B. Mus. in Piano, West Virginia University, 1942

MASTER OF SCIENCE IN ENGINEERING OF MINES

Fred Rees Toothman . . . . . Hepzibah
B. S. E. M., West Virginia University, 1941

PROFESSIONAL CERTIFICATE OF SOCIAL WORK

Nancy Brokaw Ebeling . . . . . Wheeling
B. S. (Social Work), West Virginia University, 1945
Mary June Gilbert . . . . . Charleston
A. B., West Virginia University, 1944
Robert Burr James . . . . . Morganville
A. B., Salem College, 1945

DEGREES CONFERRED 1870-1946

Bachelor's Degrees

YEAR	A. B.	B. S.	LL. B.	B. S. C. E.	B. S. M. E.	B. S. E. M.	B. S. E. E.	B. S. Ch. E.	B. S. Ind. Ed.	B. S. Agr.	A. B in Law	Ph. B.	M. D	D. V.	B. S. H. E.	Ph. C.	Ph. G.	B. Mus.	B. S. Ed.	B. S. Phys. Ed.	B. S. Phar	B. S For.	B S. Journ	Totals
1870	1	....	....	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	1
1871	1	1	....	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	2
1872	4	....	....	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	4
1873	7	6	....	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	13
1874	7	....	....	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	7
1875	6	1	....	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	7
1876	3	6	....	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	9
1877	7	2	....	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	9
1878	5	1	....	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	6
1879	2	1	1	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	4
1880	2	2	2	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	6
1881	3	....	....	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	3
1882	7	2	1	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	10
1883	9	3	5	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	17
1884	3	1	5	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	9
1885	4	3	6	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	13
1886	5	1	7	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	13
1887	2	1	8	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	11
1888	4	....	9	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	13
1889	9	3	7	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	19
1890	6	6	....	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	12
1891	8	4	14	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	26
1892	6	2	18	4	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	30
1893	12	2	11	5	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	30
1894	8	2	23	5	....	....	....	....	....	1	....	..	....	....	....	....	....	....	....	....	....	....	....	39
1895	10	4	24	3	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	41
1896	8	3	35	....	1	....	....	....	....	1	....	..	....	....	....	....	....	....	....	....	....	....	....	48
1897	11	2	44	2	2	....	....	....	....	....	5	..	....	....	....	....	....	....	....	....	....	....	....	66
1898	9	5	18	6	....	....	....	....	....	1	5	1	....	....	....	....	....	....	....	....	....	....	....	45
1899	12	2	40	7	1	....	....	....	....	2	....	2	....	....	....	....	....	....	....	....	....	....	....	66
1900	46	1	9	....	....	....	....	....	....	1	1	..	....	....	....	....	....	....	....	....	....	....	....	58
1901	30	....	9	3	....	....	....	....	....	1	2	..	....	....	....	....	....	....	....	....	....	....	....	45
1902	25	....	17	8	2	....	....	....	....	2	....	..	....	....	....	....	....	....	....	....	....	....	....	54
1903	29	1	10	6	1	....	....	....	....	1	....	..	....	....	....	....	....	....	....	....	....	....	....	48
1904	28	....	8	2	2	....	....	....	....	2	....	..	....	....	....	....	....	....	....	....	....	....	....	42
1905	20	2	22	4	3	....	....	....	....	2	....	..	....	....	....	....	....	....	....	....	....	....	....	53
1906	18	1	17	9	6	....	....	....	....	1	....	..	3	....	....	....	....	....	....	....	....	....	....	55
1907	32	3	12	14	4	....	....	....	....	2	....	..	8	....	....	....	....	....	....	....	....	....	....	75
1908	20	4	8	6	6	....	....	....	....	....	....	..	7	....	....	....	....	....	....	....	....	....	....	51
1909	27	3	2	15	4	....	....	....	....	1	....	..	4	....	....	....	....	....	....	....	....	....	....	56
1910	27	6	12	7	5	....	....	....	....	....	....	..	1	2	....	....	....	....	....	....	....	....	....	60
1911	27	5	12	6	7	2	....	....	....	3	....	..	4	2	....	....	....	....	....	....	....	....	....	68
1912	27	12	17	9	9	....	....	....	....	4	....	..	6	....	....	....	....	....	....	....	....	....	....	84
1913	28	9	15	3	1	....	2	....	....	3	....	..	....	....	....	....	....	....	....	....	....	....	....	61
1914	28	13	12	4	1	....	5	....	....	12	....	..	1	....	....	....	....	....	....	....	....	....	....	76
1915	35	25	14	8	4	1	5	....	....	10	....	..	....	....	....	....	....	....	....	....	....	....	....	102
1916	40	8	9	2	4	1	6	....	....	10	....	..	....	....	....	....	....	....	....	....	....	....	....	80
1917	62	9	16	5	2	5	....	....	....	19	....	..	....	....	1	....	1	....	....	....	1	....	....	121
1918	40	8	5	4	4	1	4	....	....	17	....	..	....	....	2	....	....	....	....	....	....	....	....	85
1919	42	11	2	....	1	2	3	....	....	5	....	..	....	....	10	....	....	....	....	....	....	....	....	76
1920	79	22	16	11	2	....	5	....	....	14	....	..	....	....	17	....	1	....	....	....	2	....	....	169
1921	93	29	12	7	5	5	7	2	1	25	....	..	....	....	9	....	3	....	....	....	1	....	....	199
1922	56	48	17	7	5	7	6	3	....	18	....	..	....	....	17	....	10	....	....	....	....	....	....	194
1923	125	47	20	4	8	9	9	4	....	41	....	..	....	....	19	....	8	....	....	....	....	....	....	294
1924	130	43	18	9	8	2	18	7	1	25	....	..	....	....	25	....	11	....	....	....	1	....	....	298
1925	132	53	26	14	3	6	17	6	....	19	....	..	....	....	25	....	6	....	....	....	....	....	....	307
1926	169	58	26	19	5	11	9	4	1	22	....	..	....	....	19	....	5	1	....	....	2	....	....	351
1927	198	55	37	13	7	10	15	7	....	14	....	..	....	....	32	....	1	1	....	....	4	....	....	394
1928	211	48	35	7	3	7	17	4	....	15	....	..	....	....	28	5	....	....	....	....	3	....	....	383
1929	230	49	42	8	7	3	15	5	....	21	....	..	....	....	31	13	....	3	2	....	....	....	....	430
1930	264	42	42	7	2	3	24	9	....	22	....	..	....	....	22	10	....	10	23	1	1	....	....	482
1931	252	42	40	9	4	2	21	7	3	23	....	..	....	....	25	5	....	12	37	6	3	....	....	491
1932	209	54	42	11	7	5	17	6	3	24	....	..	....	....	39	4	....	14	25	17	2	....	....	479
1933	233	52	45	8	7	4	13	12	5	24	....	..	....	....	33	5	....	8	28	21	1	....	....	499
1934	216	48	32	5	5	4	16	10	5	18	....	..	....	....	31	3	....	....	19	26	1	....	....	439
1935	202	54	29	7	9	....	20	14	2	21	....	..	....	....	40	....	....	....	34	22	1	....	....	455
1936	214	43	44	13	8	7	13	26	3	25	....	..	....	....	32	1	....	6	37	25	6	....	....	503
1937	239	23	30	6	5	1	11	21	2	24	....	..	....	....	39	....	....	4	52	14	2	....	....	473
1938	249	17	37	7	10	4	15	19	....	17	....	..	....	....	36	..	....	13	49	20	7	....	....	500
1939	230	24	35	7	....	5	18	21	1	33	....	..	....	....	33	....	....	15	37	33	11	11	....	519
1940	192	30	34	5	19	11	16	31	....	47	....	..	....	....	28	....	....	8	30	29	8	12	14	514
1941	218	57	30	3	13	9	15	29	....	50	....	..	....	....	40	....	....	14	48	28	7	11	15	587
1942	219	53	28	6	19	5	6	24	....	47	....	..	....	....	42	....	....	17	32	15	13	10	16	552
1943	169	54	9	2	9	8	17	23	....	33	....	..	....	....	51	....	....	24	32	18	11	5	12	477
1944	108	57	6	9	11	8	14	17	....	7	....	..	....	....	45	....	....	14	18	12	6	1	11	344
1945	101	58	4	1	6	....	4	3	....	2	....	..	....	....	40	....	....	9	19	7	4	1	8	267
1946	116	83	11	3	7	1	1	5	....	12	....	..	....	....	30	....	....	14	20	10	4	3	9	329
Totals	5666	1424	1259	355	269	149	384	320	27	744	13	3	34	4	841	46	46	109	542	304	102	54	85	12858

Master's Degrees

YEAR	A. M.	M. S.	LL. M.	M. S. Agr	M. S. C. E.	M. S. M. E.	M. S. Ch. E.	M. S. E. M.	M. S. E. E.	M. Mus.	Totals
1873	1										1
1874	2										2
1875	4										4
1876	7	5									12
1877	2										2
1878	12										12
1879	3	5									8
1880	7	2									9
1881	5										5
1882	2	1									3
1883	3	2									5
1884	3										3
1885	3										3
1886	9	3									12
1887	3	3									6
1888	5	4									9
1889	4										4
1890	1	1									2
1891	2										2
1892											
1893											
1894	1										1
1895											
1896	1										1
1897	1										1
1898			1								1
1899	3										3
1900	4										4
1901	3										3
1902	4	1									5
1903	4										4
1904	4		2								6
1905	2										2
1906	2										2
1907											
1908	1		2								3
1909	6										6
1910	2		1								3
1911	3										3
1912	1		1								2
1913	2		2								4
1914	1										1
1915	2	1	1								4
1916	5			1							6
1917	5										5
1918	1	2		1	1						5
1919											
1920	4	2									6
1921	5	2									7
1922	11	2									13
1923	13	1				1					15
1924	15	2		2			1				20
1925	14	3		3	2						22
1926	21	3		6			2				32
1927	27	1		5		1	1	1			36
1928	30	3		5			1	2			41
1929	36	5		3			1				45
1930	64	4		7				1			76
1931	39	29			1	1	2				72
1932	33	29			2			1	1		66
1933	46	19			3		2	1	2		73
1934	51	24					1				76
1935	62	23					4		2		91
1936	65	20			1		1				87
1937	76	19					2				97
1938	94	24									118
1939	119	22			1		1		1		144
1940	110	38					8				156
1941	132	39				1	4	1		1	178
1942	125	41					3			2	171
1943	71	14								1	86
1944	28	8									36
1945	23	7									30
1946	44	13						1	1	1	60
Totals	1494	427	10	33	11	4	34	8	7	5	2033

Doctor's Degrees

	Doctor of Philosophy
1902	1
1907	1
1932	6
1933	5
1934	3
1935	10
1936	4
1937	2
1938	2
1939	3
1940	4
1941	4
1942	3
1943	3
1945	1
TOTAL	52

Professional Degrees

YEAR	Civil Engineer	Mechanical Engineer	Electrical Engineer	Chemical Engineer	Engineer of Mines	TOTALS
1889	3					3
1897	1					1
1898	1					1
1909		1	2			3
1915	3					3
1918	1					1
1920	1					1
1921		1				1
1924	1		1			2
1928		1				1
1929		1				1
1930			1			1
1932	1					1
1933	1	1				1
1934				1		2
1937		1				1
1938	1		2			1
1940			1		1	3
1941					1	2
1945			1			1
1946				1		1
Totals	14	6	8	2	2	32

Honorary Degrees

YEAR	Doctor of Philosophy	Doctor of Divinity	Doctor of Laws	Doctor of Literature	Doctor of Civil Laws	Doctor of Science	TOTALS
1875	1						1
1883		2	1				3
1885			1				1
1886			3				3
1887		1					1
1888	1	1	2				4
1889	1	2	1				4
1890	2		1				3
1891	1	4	1				6
1892	1	2	1				4
1893			1				1
1894	3	3		1			7
1896	1	1	1				3
1897			1		1		2
1919			15		2		17
1921			1				1
1928			1				1
1929			3				3
1932			2				2
1933			2				2
1934			1				1
1937			1				1
1938			1			1	2
1939			1	1			2
1940			3			1	4
1941			1				1
1942			3			1	4
1945			1				1
Totals	11	16	50	2	3	3	85

THE CLASSIFIED ENROLLMENT,

In the Colleges and Schools

A. The Summer Session, 1946

	Senior			Junior			Sophomore			Freshman			Total			Special			Grand Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Agr., For. and H. E.	35	16	51	31	16	47	35	10	45	51	10	61	152	52	204	.....	2	2	152	54	206
Arts and Sciences	69	34	103	147	43	190	183	35	218	393	32	425	792	144	936	12	34	46	804	178	982
Education	12	27	39	6	14	20	.....	.....	.....	.....	.....	.....	18	41	59	.....	1	1	18	42	60
Engineering	30	.....	30	70	1	71	129	1	130	199	.....	199	428	2	430	.....	.....	.....	428	2	430
Graduate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	372	319	691	.....	.....	.....	372	319	691
Journalism	6	1	7	7	5	12	.....	.....	.....	.....	.....	.....	13	6	19	.....	.....	.....	13	6	19
Law	13	.....	13	24	1	25	90	1	91	.....	.....	.....	127	2	129	2	.....	2	129	2	131
Mines	9	.....	9	11	.....	11	7	.....	7	14	.....	14	41	.....	41	.....	.....	.....	41	.....	41
Music	3	10	13	4	5	9	3	6	9	4	6	10	14	27	41	1	.....	1	15	27	42
Pharmacy	7	.....	7	9	.....	9	15	1	16	9	.....	9	40	1	41	.....	.....	.....	40	1	41
Phys. Ed. and Athletics	6	8	14	5	5	10	6	2	8	14	3	17	31	18	49	.....	1	1	31	19	50
Total	190	96	286	314	90	404	468	56	524	684	51	735	2,028	612	2,640	15	38	53	2,043	650	2,693

B. The First Semester (September to January), 1946-47

Agr., For. and H. E.	65	39	104	50	52	102	111	55	166	232	57	289	458	203	661	1	3	4	459	206	665
Arts and Sciences	164	94	258	244	123	367	524	215	739	1,336	246	1,582	2,268	678	2,946	29	32	61	2,297	710	3,007
Education	11	23	34	10	13	23	.....	.....	.....	.....	.....	.....	21	36	57	.....	1	1	21	37	58
Engineering	69	2	71	147	2	149	332	1	333	517	2	519	1,065	7	1,072	.....	.....	.....	1,065	7	1,072
Graduate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	236	111	347	.....	.....	.....	236	111	347
Journalism	9	8	17	12	13	25	.....	.....	.....	.....	.....	.....	21	21	42	1	.....	1	22	21	43
Law	16	2	18	34	3	37	160	4	164	.....	.....	.....	210	9	219	4	1	5	214	10	224
Medicine	21	11	32	24	12	36	.....	.....	.....	.....	.....	.....	45	23	68	.....	.....	.....	45	23	68
Mines	12	.....	12	20	.. ..	20	25	.....	25	53	.....	53	110	.....	110	.....	.....	.....	110	.....	110
Music	5	11	16	7	17	24	5	12	17	10	24	34	27	64	91	.....	1	1	27	65	92
Pharmacy	8	4	12	17	6	23	33	7	40	28	3	31	86	20	106	.....	.....	.....	86	20	106
Phys. Ed. and Athletics	10	21	31	16	15	31	30	24	54	85	25	110	141	85	226	.....	1	1	141	86	227
Total	390	215	605	581	256	837	1,220	318	1,538	2,261	357	2,618	4,688	1,257	5,945	35	39	74	4,723	1,296	6,019

C. The Second Semester (January to June), 1946-47

	Senior			Junior			Sophomore			Freshman			Total			Special			Grand Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Agr., For. and H. E.	64	41	105	79	48	127	96	45	141	183	55	238	422	189	611	8	5	13	430	194	624
Arts and Sciences	184	88	272	381	131	512	542	208	750	1,020	219	1,239	2,127	646	2,773	20	32	52	2,147	678	2,825
Education	14	22	36	9	13	22	.....	.....	.....	.....	.....	.....	23	35	58	.....	1	1	23	36	59
Engineering	90	2	92	170	1	171	402	2	404	407	1	408	1,069	6	1,075	1	.....	1	1,070	6	1,076
Graduate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	280	132	412	.....	.....	.....	280	132	412
Journalism	14	11	25	16	11	27	.....	.....	.....	.....	.....	.....	30	22	52	1	.....	1	31	22	53
Law	18	2	20	75	2	77	122	4	126	.....	.....	.....	215	8	223	1	.....	1	216	8	224
Medicine	22	7	29	23	13	36	.....	.....	.....	.....	.....	.....	45	20	65	.....	.....	.....	45	20	65
Mines	10	.....	10	25	.....	25	39	.....	39	36	.....	36	110	.....	110	.....	.....	.....	110	.....	110
Musi	8	11	19	6	15	21	6	11	17	13	13	26	33	50	83	.....	2	2	33	52	85
Pharmacy	9	4	13	24	7	31	27	7	34	24	3	27	84	21	105	.....	.....	.....	84	21	105
Phys. Ed. and Athletics	12	19	31	27	22	49	41	17	58	72	21	93	152	79	231	.....	1	1	152	80	232
Total	445	207	652	835	263	1,098	1,275	294	1,569	1,755	312	2,067	4,590	1,208	5,798	31	41	72	4,621	1,249	5,870

D. The Academic Year (September to June), 1946-47

Agr., For. and H. E.	68	40	108	57	53	110	121	56	177	257	63	320	503	212	715	3	4	7	506	216	722
Arts and Sciences	171	98	269	250	128	378	563	225	788	1,480	264	1,744	2,464	715	3,179	32	48	80	2,496	763	3,259
Education	11	23	34	10	14	24	.....	.....	.....	.....	.....	.....	21	37	58	.....	2	2	21	39	60
Engineering	72	2	74	153	2	155	354	1	355	567	2	569	1,146	7	1,153	.....	.....	.....	1,146	7	1,153
Graduate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	300	153	453	.....	.....	.....	300	153	453
Journalism	9	9	18	12	14	26	.....	.....	.....	.....	.....	.....	21	23	44	1	.....	1	22	23	45
Law	16	2	18	35	3	38	171	4	175	.....	.....	.....	222	9	231	4	1	5	226	10	236
Medicine	21	11	32	24	12	36	.....	.....	.....	.....	.....	.....	45	23	68	.....	.....	.....	45	23	68
Mines	12	.....	12	20	.....	20	29	.....	29	58	.....	58	119	.....	119	.....	.....	.....	119	.....	119
Music	5	11	16	8	17	25	5	12	17	14	24	38	32	64	96	.....	2	2	32	66	98
Pharmacy	9	4	13	19	6	25	35	7	42	28	3	31	91	20	111	.....	.....	.....	91	20	111
Phys. Ed. and Athletics	11	22	33	17	15	32	31	24	55	100	26	126	159	87	246	.....	1	1	159	88	247
Total	405	222	627	605	264	869	1,309	329	1,638	2,504	382	2,886	5,123	1,350	6,473	40	58	98	5,163	1,408	6,571

E. The Summary for 1946-47

	Senior			Junior			Sophomore			Freshman			Total			Special			Grand Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Agr., For. and H. E.	70	47	117	60	57	117	121	56	177	258	65	323	509	225	734	2	6	8	511	231	742
Arts and Sciences	198	101	299	268	137	405	590	225	815	1,533	268	1,801	2,589	731	3,320	39	73	112	2,628	804	3,432
Education	18	40	58	12	24	36	.....	.....	.....	.....	.....	.....	30	64	94	.....	3	3	30	67	97
Engineering	83	2	85	153	1	154	359	1	360	574	2	576	1,169	6	1,175	.....	.....	.....	1,169	6	1,175
Graduate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	539	391	930	.....	1	1	539	392	931
Journalism	10	8	18	13	15	28	.....	.....	.....	.....	.....	.....	23	23	46	1	.....	1	24	23	47
Law	19	2	21	39	1	40	175	1	176	.....	.....	.....	233	4	237	5	.....	5	238	4	242
Medicine	21	9	30	24	14	38	.....	.....	.....	.....	.....	.....	45	23	68	.....	.....	.....	45	23	68
Mines	13	.....	13	21	.....	21	28	.....	28	60	.....	60	122	.....	122	.....	.....	.....	122	.....	122
Music	7	16	23	6	17	23	6	11	17	18	23	41	37	67	104	1	2	3	38	69	107
Pharmacy	11	4	15	21	7	28	35	5	40	28	2	30	95	18	113	.....	.....	.....	95	18	113
Phys. Ed. and Athletics	12	28	40	17	16	33	31	23	54	106	22	128	166	89	255	.....	2	2	166	91	257
Total	462	257	719	634	289	923	1,345	322	1,667	2,577	382	2,959	5,557	1,641	7,198	48	87	135	5,605	1,728	7,333

EXTENSION AND SHORT COURSES*

COURSES AT MORGANTOWN:			
Appalachian Gas Measurement Short Course	436	.....	436
Coal Mining Short Course	31	.....	31
Fire School	173	.....	173
Vocational Agriculture Non-credit Students	5	.....	5
Total Enrollment at Morgantown	6,250	1,728	7,978
University Extension of Collegiate Grade	269	370	639
EXTENSION			
Coal Mining	65	.....	65
Coal Mining Night Classes	1,281	.....	1,281
Dairy Farming	275	.....	275
Electricity	18	.....	18
Fire Service	569	.....	569
Maintenance	18	.....	18
Oil and Gas	325	.....	325
Grand Total	9,070	2,098	11,168

*April 1, 1946 to March 31, 1947, inclusive.

THE GEOGRAPHICAL DISTRIBUTION OF RESIDENT ENROLLMENT, 1946-47

By States and Foreign Countries

Alabama	2	Michigan	4
California	3	Missouri	3
Canada	1	New Jersey	27
China	1	New Mexico	1
Connecticut	3	New York	47
Costa Rica	1	North Carolina	4
Czechoslovakia	2	Ohio	48
District of Columbia	5	Pennsylvania	292
Florida	9	Puerto Rico	6
France	1	Rhode Island	1
Honduras	1	Texas	2
Illinois	9	Turkey	2
India	2	Virginia	20
Indiana	1	Washington	2
Iowa	1	West Virginia	6794
Kentucky	5	Wisconsin	2
Louisiana	2		
Maryland	23	TOTAL	7333
Massachusetts	6		

By West Virginia Counties

Barbour	77	Mingo	62
Berkeley	45	Monongalia	1524
Boone	45	Monroe	20
Braxton	68	Morgan	22
Brooke	88	Nicholas	66
Cabell	95	Ohio	330
Calhoun	17	Pendleton	23
Clay	52	Pleasants	24
Doddridge	26	Pocahontas	58
Fayette	121	Preston	221
Gilmer	37	Putnam	28
Grant	23	Raleigh	158
Greenbrier	113	Randolph	93
Hampshire	32	Ritchie	69
Hancock	150	Roane	73
Hardy	19	Summers	34
Harrison	507	Taylor	117
Jackson	67	Tucker	55
Jefferson	25	Tyler	47
Kanawha	697	Upshur	53
Lewis	88	Wayne	16
Lincoln	9	Webster	34
Logan	108	Wetzel	98
McDowell	99	Wirt	24
Marion	414	Wood	152
Marshall	141	Wyoming	45
Mason	22		
Mercer	107	TOTAL	6794
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